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Illston 101 Ca Francis	15	SAN JOSE DIVISION								
San]	16									
	17	CISCO SYSTEMS, INC.,	Case No. 5:14-cv-03236-RMW-HRL							
	18	Plaintiff,	THIRD AMENDED COMPLAINT FOR:							
	19	v.	(1) NEGLIGENCE; (2) NEGLIGENT							
	20	STMICROELECTRONICS, INC. STMICROELECTRONICS, S.R.L	and MISREPRESENTATIONS;							
	21	Defendants.	MISREPRESENTATIONS; (4) NEGLIGENT INTERFERENCE							
	22		WITH PROSPECTIVE ECONOMIC ADVANTAGE;							
	23		(5) INTENTIONAL INTERFERENCE WITH PROSPECTIVE ECONOMIC							
	24		ADVANTAGE; AND (6) INTENTIONAL INTERFERENCE							
	25		WITH EXISTING CONTRACTUAL RELATIONS.							
	26		DEMAND FOR JURY TRIAL							
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Winston & Strawn LLP 101 California Street San Francisco, CA 94111-5802

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Cisco Systems, Inc. ("Cisco") alleges the following against STMicroelectronics, Inc. ("ST Micro-US") and STMicroelectronics, S.r.l. ("ST Micro-Italy"), for its Third Amended Complaint:

NATURE OF ACTION

- 1. By mid-2013, Cisco had positioned itself for success in India's set top industry. Cisco had strong relations with eight of the nine leading cable companies in the country. Cisco's set top box (the 3410 DVB) was a common feature in households, with Cisco shipping millions of units to its cable customers, which were then deployed into people's homes. By this time, the Indian set top market was a significant source of revenue and Cisco anticipated continued growth in the quarters and years ahead.
- 2. Cisco's position in the Indian set top market and its relationship with cable companies in the country was destroyed by ST Micro-US and ST Micro-Italy (collectively, "ST Micro"). ST Micro manufactured, marketed, and sold a chip (the Viper17LN) used within the power supply unit embedded in Cisco's set top boxes. In 2012, ST Micro started to supply Cisco with millions of defective and potentially defective chips. ST Micro's chips overheated when used by consumers, which caused the set top boxes to cease working. Hundreds of thousands of angry consumers returned malfunctioning set top boxes to Cisco's cable customers. Cisco's customers were furious.
- 3. ST Micro knew the chips were defective and potentially defective. ST Micro had changed the process for manufacturing the chips. Among other things, ST Micro changed the epoxy resin used in the chip's packaging and added a baking process prior to cropping the chips. Routine and standard testing performed by ST Micro following these manufacturing changes notified, or should have notified, ST Micro that the chips were susceptible to overheating when consumers turned on their set top boxes. Additionally, the tests performed by ST Micro on malfunctioning set top boxes confirmed that the chips were the root cause of the problem.
- 4. Yet, the damage caused by ST Micro's manufacturing and sale of defective and potentially defective chips would have been limited if ST Micro had not concealed and lied about the situation. In June 2013, Cisco sought ST Micro's assistance with addressing and remedying the set top failures. Cisco explained to ST Micro that its preliminary analysis indicated that ST Micro's chip was defective and causing the set top failures. Cisco explained that it needed ST Micro's

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assistance to determine why the chip was defective, how it could be remedied, and the likelihood of future failures. In response, officers of ST Micro-US and ST Micro-Italy promised to provide Cisco their full assistance, including complete and accurate information regarding the Viper chip.

- 5. ST Micro broke its promise. ST Micro did not provide Cisco with complete and accurate information. Officers of ST Micro-US and ST Micro-Italy told Cisco that the Viper chip was not defective and not the cause of the set top failures. Officers of ST Micro-US and ST Micro-Italy told Cisco that its chip had a failure rate of less than 0.01%. Officers of ST Micro-US and ST Micro-Italy told Cisco that it had implemented a baking process that cured any potential defects with the Viper chip. And, officers of ST Micro-US and ST Micro-Italy told Cisco that chips it manufactured following implementation of a baking process were defect-free. During meetings and conference calls spanning six months, officers of ST Micro-US and ST Micro-Italy repeatedly assured Cisco that the Viper chips would not cause the set top boxes to fail. Each of these statements was false.
- 6. Moreover, the ST Micro officers communicating with Cisco knew or should have known that each of these statements was false when they were made. These officers knew or should have known that all of the Viper chips were defective or potentially defective, that the defective chips would cause the set top boxes to fail, that the failure rate for the chips was significantly greater than 0.01%, that ST Micro did not apply a baking process to all of its chips, that the baking process did not cure the chips' defect, and that ST Micro was supplying Cisco with defective and potentially defective chips. Instead of providing Cisco the complete and accurate information promised, officers of ST Micro-US and ST Micro-Italy knowingly or negligently provided Cisco with false information about its chips.
- 7. ST Micro's decision to provide Cisco with false information had a devastating consequence on Cisco's relationship with its cable customers. Cisco relied on the information provided by ST Micro when making manufacturing decisions, repairing set top boxes, screening set top boxes, and communicating with customers. Based on ST Micro's assurances, Cisco continued manufacturing and repairing set top boxes with ST Micro's chips. Cisco also told its customers that the failure problem with the set top boxes had been resolved. Cisco continued to supply its

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customers with thousands of set top boxes containing ST Micro's chips and assured its customers that they would not have the same problem as before—set top failures.

- Yet, as ST Micro knew would happen, the set top boxes continued to fail. Cisco's customers went from being frustrated to being irate and terminating their relationships with Cisco. Cisco's customers believed that Cisco was not capable of supplying functioning set top boxes and that Cisco had deceived them. Cisco had promised to supply functioning set top boxes and failed. By the time ST Micro accepted responsibility for the set top failures, and admitted its mistakes and misrepresentations to Cisco and its customers, it was too late for Cisco to salvage its relationships. ST Micro had done irreparable damage to Cisco's credibility.
- 9. Cisco now seeks recovery from ST Micro for the damage caused by its negligence ST Micro's misconduct caused Cisco to incur millions of dollars of and misrepresentations. expenses, including costs associated with manufacturing and repairing defective set top boxes, inspecting and replacing defective chips, and storing set top boxes that customers would not accept due to the defective chips. ST Micro's misconduct also cost Cisco millions of dollars in lost sales. Cisco's customers cancelled existing and future orders for Cisco's set top boxes as a direct result of ST Micro's misconduct. Finally, ST Micro's misconduct injured Cisco's reputation with Indian cable companies and consumers.

PARTIES

- 10. Cisco Systems, Inc. ("Cisco") is, and at all times mentioned herein was, a corporation duly organized and existing under the laws of the State of California, with its principal place of business in San Jose, California.
- STMicroelectronics, Inc. ("ST Micro-US") is, and at all times mentioned herein was, 11. a corporation duly organized and existing under the laws of the State of Delaware, with its principal place of business in Coppell, Texas. ST Micro-US is a subsidiary of STMicroelectronics N.V.
- 12. Bassel Atala, Marietta Axisa, Michael Cosson, Luca DiFalco, Aymeric Gisselbrecht, Perry Mason, Brian Mielewski, and John Rossi are officers of ST Micro-US who communicated directly with Cisco regarding the set top failures and ST Micro's chip. ST Micro-US is responsible

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for the actions and omissions of these officers. The actions and omissions by these officers discussed below were within the course and scope of their responsibilities at ST Micro-US.

- 13. STMicroelectronics, S.r.l. ("ST Micro-Italy") is, and at all times mentioned herein was, a corporation duly organized and existing under the laws of Italy, with its principal place of business in Catania, Italy. ST Micro-Italy is a subsidiary of STMicroelectronics, N.V.
- 14. On information and belief, Luigi Areuri, Ignazio Bellomo, Maria-Rosa Borghi, Marcello Cicchetti, Angelo D'Arrigo, Antonio Grimaldi, Matteo Lo Presti, Claudio Mazzurco, Giacomo Mercadante, Antonino Motta, Fabio Salanitri, Francesca Sandrini, Max Saponaro, Mirko Sciortino, Sergio Spampinato, and David Simone Trapani are officers of ST Micro-Italy. ST Micro-Italy is responsible for the actions and omissions of these officers. The actions and omissions by these officers discussed below were within the course and scope of their responsibilities at ST Micro-Italy.
- 15. On information and belief, William Chan, Sam Guo, Blancky Ho, Samuel Liu, and Charlie Zhu are officers of another STMicroelectronics N.V. subsidiary. On information and belief, they are officers and employees of a STMicroelectronics subsidiary headquartered in Shanghai, China (ST Micro-China).
- 16. The officers of ST Micro-US, ST Micro-Italy, and ST Micro-China identified above are collectively referred to as the "Participating Officers" in the Third Amended Complaint. The Participating Officers agreed to participate in a conspiracy to defraud Cisco by concealing the latent defect with the Viper chips and providing Cisco inaccurate information regarding the Viper chip.

VENUE AND JURISDICTION

- 17. Venue is proper in this Court pursuant to 28 U.S.C.A. § 1391(b)(2). A substantial part of the events and omissions giving rise to Cisco's claims occurred in this district. Officers of ST Micro-US and ST Micro-Italy made material misrepresentations to officers of Cisco located in this district. Officers of ST Micro-US and ST Micro-Italy also sent materially misleading documents to officers of Cisco located in this district.
- 18. Subject matter jurisdiction is proper in this Court pursuant to 28 U.S.C.A. § 1332(a). The amount in controversy exceeds \$75,000 and the parties are residents of diverse states. Cisco is a

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resident of California. ST Micro-US is a resident of Delaware and Texas. ST Micro-Italy is a resident of a foreign state (Italy).

- 19. This Court has personal jurisdiction over ST Micro-US for the following reasons: (a) ST Micro-US maintains an office in Santa Clara, California, and is licensed to do business in California, (b) the Participating Officers of ST Micro-US communicated with Cisco officers in this district and those communications are at issue in the litigation, (c) the Participating Officers of ST Micro-US transmitted false and misleading documents to Cisco officers in this district and those documents are at issue in the litigation, (d) the Participating Officers of ST Micro-US made promises to take action for the benefit of and to provide information to Cisco and Cisco officers in this district, (e) the Participating Officers of ST Micro-US knew and intended for their misconduct to cause economic harm to Cisco and knew and intended that the harm would adversely impact Cisco in California, (f) the Participating Officers of ST Micro-US knew and intended to interfere with business relationships developed and maintained by officers of Cisco in this district, and (g) the Participating Officers of ST Micro-US contacted Cisco officers in this district to solicit and further the sale of ST Micro's products, including the Viper chip.
- 20. This Court has personal jurisdiction over ST Micro-Italy for the following reasons: (a) the Participating Officers of ST Micro-Italy conspired with the Participating Officers of ST Micro-US and the Court has personal jurisdiction over ST Micro-US, (b) the Participating Officers of ST Micro-Italy communicated with Cisco officers in this district and those communications are at issue in the litigation, (c) the Participating Officers of ST Micro-Italy transmitted false and misleading documents to Cisco officers in this district and those documents are at issue in the litigation, (d) the Participating Officers of ST Micro-Italy made promises to take action for the benefit of and to provide information to Cisco and Cisco officers in this district, (e) the Participating Officers of ST Micro-Italy knew and intended for their misconduct to cause economic harm to Cisco and knew and intended that the harm would adversely impact Cisco in California, (f) the Participating Officers of ST Micro-Italy knew and intended to interfere with business relationships developed and maintained by officers of Cisco in this district, and (g) the Participating Officers of

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ST Micro-Italy contacted Cisco officers in this district to solicit and further the sale of ST Micro's products, including the Viper chip.

21. This Court also has personal jurisdiction over ST Micro-Italy because ST Micro-Italy sought relief from this Court in this case. After Cisco filed its First Amended Complaint, STMicro-US informed Cisco that it claimed six of the exhibits to that Complaint should have been filed under seal based on a non-disclosure agreement between Cisco and ST Micro-US. Out of professional courtesy, Cisco filed a motion to have the documents removed from the public record—which was granted—and on September 9, 2014, Cisco filed an administrative motion asking this Court to file those exhibits under seal pending the submission of a declaration by STMicro-US showing good cause to seal the exhibits. The declaration filed by STMicro-US in support of the administrative motion was signed by Antonino Motta of ST Micro-Italy. That declaration explains that the six exhibits at issue are the confidential information of ST Micro-Italy. With the declaration, ST Micro-Italy voluntarily availed itself of this Court's jurisdiction.

ALLEGATIONS

22. The Participating Officers conspired to conceal information regarding defects with ST Micro's chips and provide Cisco inaccurate information regarding the chips. Each of the Participating Officers communicating with Cisco knew or should have known that ST Micro manufactured and supplied Cisco with defective and potentially defective chips. Instead of providing this information to Cisco, the Participating Officers denied a problem with the Viper chips, concealed the extent of the problem, and misrepresented the reliability of the Viper chips. This conspiracy had a devastating consequence on Cisco's set top business in India.

I. CISCO ESTABLISHED ITSELF AS ONE OF THE LEADING SET TOP SUPPLIERS IN THE INDIAN CABLE INDUSTRY.

23. For the last several years, Cisco has devoted significant resources to developing business relationships with cable companies in India. With respect to Cisco's set top business, Cisco sells the set top boxes to a cable company (commonly referred to as a Multi-System Operator or "MSO"). The cable company, in turn, sells or leases the set top boxes to Local Cable Operators

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("LCOs"). The LCOs have contracts with and provide set top boxes to consumers in their personal homes or offices.

- 24. As a result of its considerable efforts, by mid-2013, Cisco had become one of the largest suppliers of digital cable set top boxes in India. Cisco had business relationships with nine of the largest cable companies in India, including Hathway Cable & Datacom Limited, DEN Networks Limited, Gujarat Telelink Private Limited ("GTPL"), Manthan Broadband Services Private Limited, Asianet Satellite Communications Limited, and Fastway Transmission Private Limited. Cisco shipped approximately 6.4 million set top boxes to its customers between January 2012 and June 2013 alone. During this period, Cisco anticipated this geographic market would continue to be a profitable line of business for the remainder of CY 2013 and beyond.
- 25. The Participating Officers communicating with Cisco were aware of and familiar with Cisco's business relationships with these cable companies. During the relevant period and before, (a) Cisco provided the Participating Officers with information identifying the cable companies that received and used Cisco's set top boxes, (b) Cisco discussed with the Participating Officers the problems these cable companies were having with the set top boxes, (c) the Participating Officers had access to and, on information and belief, reviewed publicly available reports identifying these cable companies as Cisco's customers, and (d) the Participating Officers were aware that one or more subsidiaries of STMicroelectronics N.V. marketed products to these same cable companies and, as a result, knew which companies used Cisco's set top boxes.
- 26. In June 2013, Cisco learned that several of its cable customers in India were experiencing significant failure rates with Cisco's set top boxes (the 3410 DVB). The set top boxes either would not power on or would continuously reboot. In general, set top boxes fail at a rate of far less than 1%. Cisco's set top boxes were failing at a rate of about 8%. This was a failure rate well beyond what is expected in the industry and by Cisco's customers.
- 27. During this period, angry consumers started to return Cisco's set top boxes to the LCOs in droves. The LCOs, in turn, sent the returned set top boxes to Cisco's cable-company customers. Neither the LCOs nor the cable companies were equipped to handle the volume of the returns. At first, Cisco did not know why its set top boxes were failing. Cisco eventually learned

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that its set top boxes were failing because ST Micro knowingly or negligently provided Cisco with a defective chip used in the power supply unit of the set top boxes.

ST MICRO KNOWINGLY OR NEGLIGENTLY PROVIDED CISCO WITH II. **DEFECTIVE PRODUCTS.**

- 28. The problem with Cisco's set top boxes was eventually traced to a defective chip. ST Micro manufactured the Viper 17 Pulse Width Modulation chip (the "Viper chip" or "chip"). The Viper chip was the power supply unit ("PSU") controller chip in the power supply of Cisco's set top boxes.
- 29. In 2012, unknown to Cisco, ST Micro changed the process for manufacturing the Viper chip. ST Micro moved its wafer fabrication from a facility in Catania, Italy, to a facility in Singapore. On information and belief, this transfer resulted in a change in the Boron Phosphor Silicon Gate ("BPSG") passivation layer for the Viper chip. At the same time, ST Micro moved its DIP assembly line from a Shenzhen facility ("SHZ") to a LongGang facility ("LGG"). ST Micro also changed the molding compound used with the Viper chip packaging from a standard epoxy resin to a Halogen Free ("HF") material. Thus, on information and belief, ST Micro changed both the BPSG passivation layer thickness and molding compound used with the Viper chip. ST Micro did not inform Cisco of these changes when they were made.
- 30. ST Micro's decision to change the manufacturing process for the Viper chip proved disastrous. Many of the Viper chips manufactured using this new process were defective. The chips experienced excessive leakage current (referred to as IDSS leakage) in the MOSFET switch when the set top boxes were used in an ordinary and routine manner. The cause of the excessive IDSS leakage was a combination of the HF resin plus the thickness of the BPSG passivation layer. The BPSG passivation layer was too thin to prevent parasitic (an undesired) ion migration. This migration caused the chip to produce higher Drain-Source currents, resulting in a high internal temperature. The higher internal temperature triggered the chip's Over Temp Protection ("OTP") which shut down the chip and, in turn, the set top box.

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A. ST Micro knew or should have known its Viper chips were defective prior to June 2013.

- 31. On information and belief, the Participating Officers who were communicating with Cisco knew or should have known that the Viper chip had a latent defect before and during conversations with Cisco. The Participating Officers received reports regarding risk/defect analysis testing on the Viper chip following manufacturing changes and they received reports regarding failure analysis performed on the Viper chip. On information and belief, the Participating Officers received and/or discussed these reports before communicating with Cisco.
- 32. Additionally, the Participating Officers communicated on a daily and weekly basis with each other regarding the Viper chip and the set top failures during the relevant period. The ST Micro officers who participated in these discussions, including the Participating Officers, learned of and discussed the latent defect in the Viper chip causing an abnormally high failure rate. information and belief, the Participating Officers engaged in these internal discussions before communicating with Cisco.
- 33. First, on information and belief, ST Micro conducted risk analysis testing following the change in the manufacturing process. Risk analysis testing is standard procedure by a manufacturer when it makes a change in the process used to produce a product, including changing the location of production (to Singapore), the passivation layer, and type of resin. ST Micro's risk analysis testing showed or should have showed that the BPSG passivation layer was too thin to prevent parasitic ion migration in light of the HF resin used by the LongGang ("LGG") facility. On information and belief, the results of this risk analysis testing were memorialized in internal reports (discussed above) and discussed during internal meetings (discussed above).
- 34. Second, Cisco alerted ST Micro to a potential problem with its Viper chip in Spring 2013. Specifically, in May 2013, one of Cisco's manufacturers observed a failure with a Viper chip during operational reliability testing ("ORT"). On information and belief, the Viper chip failure was similar to that reported by Cisco's customers in June. The failed Viper chip was sent to ST Micro for failure analysis. In response, ST Micro reported in a Customer Complaint Report (commonly referred to as an "8D" report) that its Viper chip was not defective. A true and correct copy of ST

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Micro's Final Report is attached as Exhibit 1. In the report, ST Micro stated: "[T]here is no sign of uncontrolled process situation which could cause device specific weakness."

- 35. ST Micro's response was not true. The Viper chip was defective. As discussed below, on June 28, 2013, ST Micro provided Cisco a spreadsheet identifying the date codes for Viper chips that were and were not defective. The Viper chip Cisco had sent to ST Micro in May 2013 had a defective date code. Accordingly, ST Micro knew or should have known in May 2013 that its Viper chips had a latent defect that caused IDSS leakage. ST Micro was aware of this problem as a result of the May 2013 failure analysis. On information and belief, the results of this failure analysis were memorialized in internal reports (discussed above) and discussed during internal meetings (discussed above).
- 36. Third, on information and belief, ST Micro discovered that it was manufacturing defective Viper chips during the first quarter of 2013. ST Micro implemented a new step in its manufacturing process for the Viper chip following this discovery. ST Micro added a baking process before cropping the chip. On information and belief, ST Micro implemented the baking process to address IDSS leakage with the Viper chips. ST Micro would not have added this step to the manufacturing process unless it knew its Viper chips had a significant latent defect escape problem or, at least, the potential for a latent defect. The baking process did not solve the IDSS On information and belief, the implementation of a baking process was leakage problem. memorialized in internal reports (discussed above) and discussed during internal meetings (discussed above).
- 37. Fourth, ST Micro knew or should have known that its Viper chips had a potential IDSS leakage problem based on standard screen testing. For example, ST Micro could have identified whether its Viper chips had IDSS leakage by screening for high power consumption. ST Micro could have conducted such a screen simply by disconnecting the + terminator of the bulk capacitor and connecting a DC power supply to the DRAIN pin though an ammeter. The Viper chip would be identified as likely defective due to IDSS leakage if the ammeter registered an unexpectedly high temperature. ST Micro discovered or would have discovered the IDSS leakage problem had it performed standard screen testing. On information and belief, the results of this

screen testing were memorialized in internal reports (discussed above) and discussed during internal meetings (discussed above).

38. On information and belief, ST Micro shipped over one million defective and potentially defective Viper chips for Cisco's set top boxes following the 2012 change in its manufacturing process. The ST Micro officers communicating with Cisco, including the Participating Officers, either knew these chips were defective and potentially defective as a result of its testing, failure analysis, and screening; or, in the alternative, these officers should have known that these chips were defective and potentially defective as a result of the testing, failure analysis, and screening ST Micro should have performed. By the time Cisco became aware of a potential problem, millions of set top boxes containing defective and potentially defective Viper chips had been deployed to Cisco's customers and their consumers.

B. The Participating Officers communicating with Cisco knew or should have known about the nature, scope, and duration of the Viper chip defect.

- 39. The nature, scope, and duration of the Viper chip defect were known to the Participating Officers before they communicated with Cisco. Specifically, the Participating Officers knew or should have known prior to communicating with Cisco that (a) all of the Viper chips were defective or potentially defective, (b) the defective chips would cause the set top boxes to fail, (c) the failure rate for the chips was significantly greater than 0.01%, (d) ST Micro did not apply a baking process to all of its chips, (e) the baking process did not cure the Viper chips' defect, and (f) ST Micro had supplied and continued to supply defective and potentially defective chips.
- 40. On information and belief, the Participating Officers obtained the information set forth above by receiving and reviewing internal reports before and after June 10, 2013, regarding the nature, scope and duration of the Viper chip defect. On information and belief, the following ST Micro officers, including the Participating Officers, received and reviewed reports, including those discussed above, regarding the Viper chip defect:
 - a. Luigi Arcuri (Design Engineer, Italy)
 - b. Salvo Arcidiacono (BE Product Manager, Italy)
 - c. Bassel Atala (Tqem/Quality, USA)

	1	d. Marietta Axisa (Tqem/Quality, USA)
	2	e. Maria-Rosa Borghi (BU Director, Italy)
	3	f. Fabio Cacciotto (Application Engineer, Italy)
	4	g. Michele Calderoni (Quality & Reliability Director, Italy)
	5	h. Santo Capizzi (Quality Assurance Enginer, Italy)
	6	i. Vincenzo Cavallaro (Quality Assurance Manager, Italy)
	7	j. William Chan (Field Quality Service, Hong Kong)
	8	k. Michael Cosson (Account Manager, USA)
	9	l. Angelo D'Arrigo (Design Manager, Italy)
	10	m. Aymeric Gisselbrecht (Dir. of Global Corporate Strategic Account, USA)
72	11	n. Carmelo Giuffrida (Quality Assurance Engineer, Italy)
San Francisco, CA 94111-5802	12	o. Sam Guo (Applications Engineer, Hong Kong)
A 94]	13	p. Blancky Ho (Field Quality Service, Hong Kong)
isco, C	14	q. Mandy Lai (Field Quality Service, Hong Kong)
Franc	15	r. Samuel Liu (Senior Technical Marketing Engineer, China)
San	16	s. Matteo Lo Presti (Group Vice President/General Manager, Italy)
	17	t. Perry Mason (Snr. Sales Mgr./Cisco Service Provider, USA)
	18	u. Claudio Mazzurco (Quality Assurance Engineer, Italy)
	19	v. Giacomo Mercadante (Marketing Engineer, Italy)
	20	w. Gabriele Monaco (Product Manager, Italy)
	21	x. Antonino Motta (Quality & Reliability Director, Italy)
	22	y. Gaetano Puglisi (Product Engieer, Italy)
	23	z. Giovanni Privitera (Product Manager, Italy)
	24	aa. Francesca Sandrini (Marketing Manager, Italy)
	25	bb. Max Saponaro (Product Engineer, Italy)
	26	cc. Alvin Seah (Central Engineering Department, China)
	27	dd. CL Soo (PTM Quality Director, China)
2	28	ee. Sergio Spampinato (Qualty Assurance Manager, Italy)

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	1		ff.	Giovanni Speciale (Product Manager, Italy)					
	2		gg.	Stephen Sun (BE Product Engineer, Italy)					
	3		hh.	David Simone Trapani (Quality Assurance Engineer, Italy)					
	4		ii.	Gianluigi Vitali (Quality & Reliabiity Director, Italy)					
	5		jj.	Xiping Yu (PTM Quality Engineer, China)					
	6		kk.	Heng Zhang (Field Quality Service, China)					
	7	41.	On in	formation and belief, the Participating Officers obtained the information set					
	8	forth above by attending internal meetings and conference calls before and after June 10, 2013,							
	9	regarding the	nature,	scope, and duration of the Viper chip defect. On information and belief, the					
	10	following ST	Micro	officers, including the Participating Officers, attended these internal meetings					
25	11	and conference	e calls:						
wn LLP Street 94111-5802	12	a.		Luigi Arcuri (Design Engineer, Italy)					
ಡ ಡ	13	b.		Salvo Arcidiacono (BE Product Manager, Italy)					
n & S Zalifori isco, C	14	c.		Bassel Atala (Tqem/Quality, USA)					
Winston & Strawn LLP 101 California Street San Francisco, CA 94111-58	15		d.	Marietta Axisa (Tqem/Quality, USA)					
San	16		e.	Maria-Rosa Borghi (BU Director, Italy)					
	17		f.	Fabio Cacciotto (Application Engineer, Italy)					
	18		g.	Michele Calderoni (Quality & Reliability Director, Italy)					
	19		h.	Santo Capizzi (Quality Assurance Engineer, Italy)					
	20		i.	Vincenzo Cavallaro (Quality Assurance Manager, Italy)					
	21		j.	William Chan (Field Quality Service, Hong Kong)					
	22		k.	Michael Cosson (Account Manager, USA)					
	23		1.	Angelo D'Arrigo (Design Manager, Italy)					
	24		m.	Aymeric Gisselbrecht (Dir. of Global Corporate Strategic Account, USA)					
	25		n.	Carmelo Giuffrida (Quality Assurance Engineer, Italy)					
	26		0.	Sam Guo (Applications Engineer, Hong Kong)					
	27		p.	Blancky Ho (Field Quality Service, Hong Kong)					
	28		q.	Mandy Lai (Field Quality Service, Hong Kong)					
				12					

Samuel Liu (Senior Technical Marketing Engineer, China)

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2		s.	Matteo Lo Presti (Group Vice President/General Manager, Italy)
3		t.	Perry Mason (Snr. Sales Mgr./Cisco Service Provider, USA)
4		u.	Claudio Mazzurco (Quality Assurance Engineer, Italy)
5		v.	Giacomo Mercadante (Marketing Engineer, Italy)
6		w.	Gabriele Monaco (Product Manager, Italy)
7		х.	Antonino Motta (Quality & Reliability Director, Italy)
8		y.	Giovanni Privitera (Product Manager, Italy)
9		z.	Gaetano Puglisi (Product Engieer, Italy)
10		aa.	Francesca Sandrini (Marketing Manager, Italy)
11		bb.	Max Saponaro (Product Engineer, Italy)
12		cc.	Alvin Seah (Central Engineering Department, China)
13		dd.	CL Soo (PTM Quality Director, China)
14		ee.	Sergio Spampinato (Qualty Assurance Manager, Italy)
15		ff.	Giovanni Speciale (Product Manager, Italy)
16		gg.	Stephen Sun (BE Product Engineer, Italy)
17		hh.	David Simone Trapani (Quality Assurance Engineer, Italy)
18		ii.	Gianluigi Vitali (Quality & Reliabiity Director, Italy)
19		jj.	Xiping Yu (PTM Quality Engineer, China)
20		kk.	Heng Zhang (Field Quality Service, China)
21	42.	On in	nformation and belief, the Participating Officers obtained the in
22	forth above p	orior to	communicating with Cisco as a result of their position within ST M
23	Micro-Italy,	and ST	Micro-China. As discussed below, starting June 10, 2013, and rep
24	multiple mee	tings ar	nd calls, officers of ST Micro-US and ST Micro-Italy assured Cisco

r.

	aa.	Francesca Sandrini (Marketing Manager, Italy)
	bb.	Max Saponaro (Product Engineer, Italy)
	cc.	Alvin Seah (Central Engineering Department, China)
	dd.	CL Soo (PTM Quality Director, China)
	ee.	Sergio Spampinato (Qualty Assurance Manager, Italy)
	ff.	Giovanni Speciale (Product Manager, Italy)
	gg.	Stephen Sun (BE Product Engineer, Italy)
	hh.	David Simone Trapani (Quality Assurance Engineer, Italy)
	ii.	Gianluigi Vitali (Quality & Reliabiity Director, Italy)
	jj.	Xiping Yu (PTM Quality Engineer, China)
	kk.	Heng Zhang (Field Quality Service, China)
42.	On in	formation and belief, the Participating Officers obtained the information set
forth above p	rior to c	communicating with Cisco as a result of their position within ST Micro-US, ST
Micro-Italy, a	and ST	Micro-China. As discussed below, starting June 10, 2013, and repeated during
multiple mee	tings an	d calls, officers of ST Micro-US and ST Micro-Italy assured Cisco that it would
communicate	with in	ndividuals knowledgeable about the Viper chip defect so they could provide
guidance on	the se	t top box failure problem. Accordingly, on information and belief, the
Participating	Officers	s obtained complete knowledge of the nature, scope, and duration of the Viper
chip defect b	efore c	ommunicating with Cisco. None of the officers communicating with Cisco,

1	including the Partic	cipating Officers, ever stated that they were not qualified and authorized to
2	communicate with	Cisco on behalf of ST Micro-US and ST Micro-Italy regarding the Viper chip
3	defect and set top f	ailures. The following ST Micro officers, including the Participating Officers,
4	engaged in meeting	s and calls with Cisco regarding the Viper chip defect and were held out by
5	ST Micro-US and S	T Micro-Italy as being knowledgeable about the nature, scope, and duration of
6	the Viper chip defec	t:
7	a.	Luigi Areuri (Design Engineer, Italy)
8	b.	Bassel Atala (Tqem/Quality, USA)
9	c.	Marietta Axisa (Tqem/Quality, USA)
10	d.	Ignazio Bellomo (Design Manager, Italy)
11	e.	Maria-Rosa Borghi (BU Director, Italy)
12	f.	William Chan (Field Quality Service, Hong Kong)
13	g.	Marcello Cicchetti (Senior Staff Engineer, Italy)
14	h.	Michael Cosson (Account Manager, USA)
15	i.	Angelo D'Arrigo (Design Manager, Italy)
16	j.	Luca DiFalco (Strategic Sectors Development Director, USA)
17	k.	Aymeric Gisselbrecht (Dir. of Global Corporate Strategic Account, USA)
18	1.	Antonio Grimaldi (Design Director, Italy)
19	m.	Fabio Gualandris (EVP, Product Quality Excellence, Switzerland)
20	n.	Sam Guo (Applications Engineer, Hong Kong)
21	o.	Blancky Ho (Field Quality Service, Hong Kong)
22	p.	Matteo Lo Presti (Group Vice President/General Manager, Italy)
23	q.	Perry Mason (Snr. Sales Mgr./Cisco Service Provider, USA)
24	r.	Claudio Mazzurco (Quality Assurance Engineer, Italy)
25	s.	Giacomo Mercadante (Marketing Engineer, Italy)
26	t.	Brian Mielewski (VP Quality for Americas Region, USA)
27	u.	Antonino Motta (Quality & Reliability Director, Italy)
28	v.	Alceo Paratore (Reliability Manager, Italy)

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W.	John Ro	ossi (SVF	W orld	Wide Sales,	USA

- x. Fabio Salanitri (Segment Marketing Manager, Italy)
- y. Francesca Sandrini (Marketing Manager, Italy)
- z. Max Saponaro (Product Engineer, Italy)
- aa. Mirko Sciortino (Senior Applications Engineer, Italy)
- bb. Vivek Sharma (Regional VP/Greater China and South Asia, India)
- cc. Harjeet Singh (Manager/Power Conversion Applicatins, India)
- dd. Sergio Spampinato (Qualty Assurance Manager, Italy)
- ee. David Simone Trapani (Quality Assurance Engineer, Italy)
- ff. Charlie Zhu (Distribution Sales Manager, China)
- 43. Finally, several of the Participating Officers obtained the information set forth above prior to communicating with Cisco as a result of their position as key contacts for Cisco. On multiple occasions, during calls, emails, reports, and presentations, officers of ST Micro-US and ST Micro-Italy identified a core group of officers as the leaders of the ST Micro response team. ST Micro presented these individuals as Cisco's key points of contacts based on their knowledge regarding the nature, scope, and duration of the Viper chip defect. Accordingly, on information and belief, these individuals participated in internal meetings and calls, as well as reviewed internal reports, in order to fully understand the Viper chip defect before communicating with Cisco. At no point did these individuals tell Cisco that they were not qualified and authorized to communicate with Cisco on behalf of ST Micro regarding the Viper chip defect and set top failures. The following ST Micro officers, including several of the Participating Officers, were identified by ST Micro-US and ST Micro-Italy as the leaders of the response team and Cisco's primary contacts:
 - a. Luigi Arcuri (Design Engineer, Italy)
 - b. Marietta Axisa (Tqem/Quality, USA)
 - c. William Chan (Field Quality Service, Hong Kong)
 - d. Michael Cosson (Account Manager, USA)
 - e. Angelo D'Arrigo (Design Manager, Italy)
 - f. Aymeric Gisselbrecht (Dir. of Global Corporate Strategic Account, USA)

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g.	Sam	Ouo i	ADI	meai	uons	Ling	meer,	110112	KOHE

- Blancky Ho (Field Quality Service, Hong Kong) h.
- i. Samuel Liu (Senior Technical Marketing Engineer, China)
- j. Perry Mason (Snr. Sales Mgr./Cisco Service Provider, USA)
- k. Giacomo Mercadante (Marketing Engineer, Italy)
- 1. Antonino Motta (Quality & Reliability Director, Italy)
- Max Saponaro (Product Engineer, Italy) m.
- n. Sergio Spampinato (Qualty Assurance Manager, Italy)
- David Simone Trapani (Quality Assurance Engineer, Italy) o.

C. ST Micro ultimately acknowledged negligently manufacturing the Viper chips used in Cisco's set top boxes.

- 44. ST Micro ultimately acknowledged that it was negligent when manufacturing the Viper chip. As discussed below, on June 21, 2013, ST Micro prepared a Customer Complaint Report (commonly referred to as an "8D" report) regarding the Viper chips used with Cisco's failed set top boxes. A true and correct copy of ST Micro's Final Report is attached as Exhibit 2. In the report, ST Micro admitted that the tested Viper chips had IDSS leakage because the BPSG passivation layer was too thin to account for a contaminant with the HF resin. Moreover, ST Micro admitted that "no [High Temperature Reverse Bias ("HTRB")] trial with Catania silicon and LongGang HF package was performed." Thus, according to this report, ST Micro did not perform a standard and expected testing that would have detected the IDSS leakage problem.
- 45. As discussed below, on September 19, 2013, ST Micro prepared another Customer Complaint Report regarding the Viper chips used with Cisco's failed set top boxes. A true and correct copy of the Final Report is attached as Exhibit 3. In this report, ST Micro again admitted that the tested Viper chips had IDSS leakage. Moreover, ST Micro admitted that "the most probable root cause is due to the effect of charges present in the molding component and migrating inside the gate area under the thermal and electrical effect." Thus, according to this report, the changes implemented by ST Micro in 2012 for the manufacturing of the Viper chips, including the use of HF resin, caused the IDSS leakage and set top failures.

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46. Finally, as discussed below, on December 20, 2013, ST Micro again admitted its responsibility for the set top failures. ST Micro prepared a summary of the Viper chip issue after performing a series of tests and observations with Cisco. A true and correct copy of ST Micro's summary is attached as Exhibit 4. In the summary, ST Micro acknowledged that the set top failures were caused by defective Viper chips. ST Micro admitted that the IDSS issue with the Viper chip had "been generated by a lack of risk analysis (incomplete FEMA) on critical process differences during the [assembly] process transfer (Shenzhen vs Long Gang with Green mold compound)." ST Micro acknowledged that "the potential charging of Power MOS due to ionic contamination [versus] the critical differences among the wafer fabs (i.e., BPSG) was not considered. This resulted in a partial qualification (no biased trials) allowing the escape of an intrinsic weakness." Thus, according to this summary, the IDSS leakage occurred because ST Micro had not performed appropriate trials following the 2012 manufacturing changes.

III. ST MICRO KNOWINGLY OR NEGLIGENTLY PROVIDED CISCO INACCURATE INFORMATION REGARDING ITS DEFECTIVE VIPER CHIPS AND REMEDIATION OF ITS DEFECTIVE VIPER CHIPS.

47. The damage caused by ST Micro's negligent production of Viper chips could have been limited. ST Micro could have informed Cisco of its manufacturing changes and it could have informed Cisco of problems when it first noticed potential defects in early 2013. ST Micro did not do so. Nor did ST Micro provide Cisco accurate information after Cisco raised the issue with ST Micro in June 2013. Instead, ST Micro responded with incomplete and inaccurate information in order to conceal the defects of the Viper chip.

ST Micro failed to tell Cisco of the latent defect of its Viper chips (June 10 to A. June 20, 2013).

48. The first step in ST Micro's disinformation to Cisco was an omission. ST Micro promised to provide Cisco complete and accurate information regarding its Viper chip after Cisco sought ST Micro's assistance in early June. Before or shortly after Cisco contacted ST Micro, the ST Micro officers communicating with Cisco knew the Viper chips were either defective or potentially defective. ST Micro did not share this information.

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- 49. On June 8, 2013, Cisco learned that several of its customers had received a large number of set top returns. The customers complained that the power supply regulator for the set top boxes malfunctioned. From the consumer's perspective, the set top boxes were not turning on. Several customers informed Cisco that they had "fixed" the problem by swapping or replacing the Viper chip used in the power supply unit. Cisco began investigating the problem immediately.
- 50. On *June 10*, 2013, Cisco held a series of internal meetings and calls following its preliminary analysis of the set top failures. Cisco determined that the power consumption of the failed set top boxes was greater than the consumption for operational set top boxes. The greater power consumption was caused by the Viper chip. The chip's temperature rose very quickly and caused the chip to cease operating. The set top box would not work once the chip ceased operating. Cisco also observed that the failed set top boxes passed testing after the Viper chip was replaced. Thus, Cisco's preliminary analysis indicated that the set top failures were caused by a defect with ST Micro's Viper chip.
- 51. On *June 10*, 2013, Cisco contacted ST Micro to discuss the problem. Mike Woods (Cisco) called Perry Mason (ST Micro-US). Cisco told ST Micro that customers were reporting failures with one of its set top boxes (the DVB 3410) and Cisco had preliminarily determined that the Viper chip caused the failures. Cisco also informed ST Micro that the set top box at issue was a high-volume product, so Cisco needed ST Micro's immediate assistance or the problem could escalate quickly. ST Micro indicated that it understood the situation and Cisco's concern. ST Micro agreed to provide immediate assistance. Mason informed Cisco that he had recruited Michael Cosson and Charlie Zhu to assist. However, Mason did not inform Cisco that he was already aware of IDSS leakage and potential IDSS leakage problems with its Viper chip due to the February 2012 manufacturing changes.
- 52. On June 12, 2013, Cisco sent an email to ST Micro regarding its most recent observations regarding the Viper issue. A true and correct copy of this email is attached as Exhibit 5. Sam Lim sent the email to several ST Micro officers, including Perry Mason, Charlie Zhu, and Michael Cosson. In the email, Cisco explained that "[t]here seems to be a growing amount of data that viper parts with batch codes in week 35 and 36 of 2012 are a problem. We need ST to support

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us in this analysis of the bad parts." Cisco also asked ST Micro to explain an engineering change order ("ECO"). Cisco stated: "There is an ECO that apparently was performed in April of 2012. Why was this ECO done? How does this ECO affect the performance of the Viper part?" ST Micro refused to explain the ECO and did not tell Cisco the impact the ECO had on the Viper chip. Nor did any of the ST Micro officers who received the email tell Cisco that they were already aware of IDSS leakage and potential IDSS leakage problems with its Viper chip due to the February 2012 manufacturing changes.

- 53. On *June 19*, 2013, Cisco sent an email to ST Micro indicating the importance of accurate information from ST Micro regarding defective Viper chips. A true and correct copy of this email is attached as Exhibit 6. Richard Marszalik sent the email to several ST Micro officers, including Sam Guo, Perry Mason, Charlie Zhu, Maria-Rosa Borghi, Michael Cosson, Antonino Motta, Blancky Ho, William Chan, Francesca Sandrini, and Fabio Salanitri.
- 54. During conference calls and emails, these ST Micro-US and ST Micro-Italy officers represented to Cisco that they were knowledgeable about the Viper chip and would assist Cisco in analyzing the set top failures, and that they knew Cisco was relying on their analysis and feedback. This was part of the core group from ST Micro that communicated frequently with Cisco and internally within ST Micro. At no point did any of these ST Micro officers indicate that they were not qualified and authorized to communicate with Cisco on behalf of ST Micro-US and ST Micro-Italy regarding the Viper chip and set top failures.
- 55. In the email, Cisco explained that it believed the Viper chip was defective due to "thermal runaway," which triggered the chip's thermal shutdown temperature. Cisco indicated that "[i]t is most important that Cisco understand how big this impact is: How many Viper IC's are tainted, if it's lot related or is this issue spread randomly on your Viper17? If it's lot related, please provide the **EXACT** lot #'s so we can start modifying these bad units." ST Micro (Sam Guo) responded that ST Micro is "following this case as top urgent!" However, ST Micro refused to provide the request information regarding bad units. Nor did any of the ST Micro officers who received the email tell Cisco that they were already aware of IDSS leakage and potential IDSS leakage problems with its Viper chip due to the February 2012 manufacturing changes.

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56. On *June 19, 2013*, Cisco and ST Micro had a conference call to discuss the problem with the Viper chips. Kay Kavia, Sam Lim, Mike Woods, Richard Marszalik, and Vino Mody participated in the call for Cisco. William Chan, Blancky Ho, Sergio Tommaso Spampinato, Perry Mason, Michael Cosson, Sam Guo, and Charlie Zhu participated in the call for ST Micro.

- 57. During the call, Cisco affirmed that its preliminary analysis indicated that the Viper chip was the root cause of the set top failures. Cisco informed ST Micro that it could not isolate the Viper problem to a single batch. Cisco also informed ST Micro that its customers were reporting problems with set top boxes that contained Viper chips with broad date range, including November 2012, December 2012, and January 2013. Finally, Cisco informed ST Micro that the Viper chip was used with 600,000 Cisco set top boxes per month. In response, the officers from ST Micro-US and ST Micro-Italy stated that they understood the situation, would assist Cisco with the situation, and would provide accurate and complete information regarding the Viper chip. The officers from ST Micro-US and ST Micro-Italy also stated that they would assign individuals with the right level of expertise to perform a root cause analysis and would expedite the analysis. However, none of the ST Micro officers participating in the call informed Cisco that they were already aware of IDSS leakage and potential IDSS leakage problems with its Viper chip due to the February 2012 manufacturing changes.
- 58. On June 20, 2013, Cisco reinforced with ST Micro the importance of accurate information and potential exposure if the situation was not addressed properly. Mike Woods (Cisco) sent an email to several ST Micro officers, including Perry Mason, Michael Cosson, and John Rossi. A true and correct copy of this email is attached as Exhibit 7. In the email, Cisco explained that "[i]t is extremely important that the Viper issue [] stay under control" because "the potential field exposure sound[s] huge." Cisco asked ST Micro to escalate the problem "to whoever runs the group that developed the Viper right away." During a follow-up conversation, Mason confirmed to Wood that ST Micro would immediately address the problem and provide Cisco with the necessary

Cisco and ST Micro held dozens of conference calls, often on a daily or weekly basis, from June 2013 through December 2013. The standard protocol was for Cisco to circulate a WebEx invitation for the conference call to the ST Micro officers who previously participated in calls and had been presented by ST Micro as members of ST Micro response team. In the Third Amended Complaint, Cisco has identified, based on its information and belief, the participants in each of the calls for Cisco and ST Micro.

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information. However, Mason did not inform Cisco that ST Micro was already aware of IDSS leakage and potential IDSS leakage problems with its Viper chip due to the February 2012 manufacturing changes.

- 59. ST Micro was not forthright with Cisco regarding the Viper chip and the association of the Viper chip with the set top failures. Cisco formally notified ST Micro of the problem on June 10. ST Micro did not provide useful information to Cisco for ten days. The individuals communicating with Cisco regarding the Viper chip were either aware of the widespread IDSS leakage problem based on reports and analysis following the manufacturing changes; or, in the alternative, they obtained that information shortly after Cisco identified the set top failures as a problem on June 10, 2013. The ST Micro officers communicating with Cisco had ten days to obtain that information and knowledge, but elected to conceal it from Cisco.
- 60. In light of ST Micro's refusal to provide information regarding its Viper chips, Cisco needed to adjust its manufacturing protocol for set top boxes. Cisco ceased the production of new set top boxes due to its concern with the Viper chip. Cisco had a backlog of customer orders, reworks, and repairs/replacement due to failed set top boxes. However, Cisco did not want to compound the problem by manufacturing and shipping additional set top boxes with potentially defective Viper chips until it received clarification and guidance from ST Micro.
- 61. Cisco also relied on ST Micro's silence in deciding that it did not need to inform its customers of a potential systematic problem with its set top boxes at that time. Cisco relied on ST Micro to inform Cisco of whether there was a widespread problem or potential problem with the Viper chip. ST Micro did not inform Cisco of such a widespread problem or potential problem. Cisco would have informed its customers of a potential systematic problem had ST Micro provided accurate information regarding its Viper chip.
 - В. ST Micro acknowledged an IDSS leakage with tested Viper chips but concealed the extent of the problem (June 21 to June 26, 2013).
- 62. The second step in ST Micro's disinformation campaign was misstatement and omission. Cisco sent ST Micro the Viper chips in two of the failed set top boxes for testing. ST Micro eventually had to admit that the Viper chips in the failed set top boxes had an IDSS

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leakage problem. However, ST Micro refused to acknowledge that IDSS leakage was a widespread problem. Instead, ST Micro represented that its Viper chips did not have a widespread problem. ST Micro also attempted to divert attention from its Viper chip by suggesting problems with Cisco's power supply unit. ST Micro was concealing the problem and what it knew about the problem from Cisco.

- 63. On June 21, 2013, ST Micro provided Cisco an "initial" report of its failure analysis. A true and correct copy of this interim report is attached as Exhibit 8. The report was approved by two Participating Officers of ST Micro-Italy: Sergio Spampinato and Antonino Motta. The report was sent by Michael Cosson (ST Micro-US) to several individuals at Cisco, including Mike Woods, Mark Schutte, Sam Lim, Vino Mody, Scott Friedman, and Kav Kavia. Perry Mason and Aymeric Gisselbrecht of ST Micro-US were also copied on the email transmitting the report. A true and correct copy of this email is attached as Exhibit 9.
- In the transmittal email, Cosson characterized this report as being based on "initial" 64. tests. He also indicated that ST Micro will "find the root causes as soon as possible." The initial report stated: "Based on our analysis we can confirm the bad functionality of the devices for IDSS failures." The report described that the Drain to Source current was breaking down under normal operation conditions, indicating a problem with the Viper IC. However, the report did not provide Cisco with a root cause for the IDSS failure. Nor did ST Micro acknowledge in the report a design defect that impacted thousands of previously shipped Viper chips.
- 65. On June 24, 2013, Cisco and officers from ST Micro-US and ST Micro-Italy conducted a conference call to discuss the importance of determining the root cause of the IDSS leakage and identifying defective Viper chips. Mike Woods, Mark Schutte, Sam Lim, Vino Mody, Scott Friedman, and Kav Kavia participated in the call for Cisco. Michael Cosson, Perry Mason, Aymeric Gisselbrecht, Antonino Motta, Sergio Tommaso Spampinato, and Davide Simone Trapani participated in the call for ST Micro. On that same day, Cosson (ST Micro-US) identified Motta, Spampinato, and Trapani (all of ST Micro-Italy) as "key" contacts for Cisco to address issues with the Viper chip and set top failures. A true and correct copy of this email is attached as Exhibit 10.

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66. During the conference call, Cisco reiterated the significance of the set top failures to its relationships with customers and the importance of immediately determining the root cause of the Viper chip problem. Cisco told ST Micro that it had to provide a means of identifying and screening off bad Viper chips. Cisco also explained to ST Micro that the Viper chip problem did not appear limited to 2012 date codes, but included 2013 as well. In response, the officers from ST Micro-US and ST Micro-Italy again stated that they understood the situation, would assist Cisco with the situation, and would provide accurate and complete information regarding the Viper chip. The officers also told Cisco that there was an ECO on the Viper chip issued in June 2013. However, they refused to explain the ECO and the impact it may have had on the Viper chip's functionality. Nor did any of the ST Micro officers participating in the call inform Cisco that they were already aware of IDSS leakage and potential IDSS leakage problems with its Viper chip due to the 2012 manufacturing changes.

- 67. On June 26, 2013, ST Micro provided Cisco an 8D report approved by two Participating Officers from ST Micro-Italy: Sergio Spampinato and Antonino Motta. See, supra, Ex. 2. The report was sent by Michael Cosson (ST Micro-US) to several individuals at Cisco, including Samer Kassis, Mike Woods, Mark Schutte, Sam Lim, Vino Mody, Scott Friedman, Kav Kavia, Ardavan Pourhamzeh, and Nan Wang. Perry Mason and Aymeric Gisselbrecht of ST Micro-US were also copied on the email transmitting the report.² A true and correct copy of this email is attached as Exhibit 11.
- 68. The 8D report stated that the tested Viper devices had excessive IDSS leakage. In the report, ST Micro indicated that the "root cause" of the leakage was the use of HF material as the epoxy resin for packaging the chip. This was a change in ST Micro's manufacturing process for the Viper chip, implemented at the same time that the wafer fabrication was moved from Catania to Singapore. The report concluded that the "HF resin is having a different chemistry for which the original BPSG thickness in Catania, was not enough to stop the effects of this different chemistry, leading to IDSS failures."

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ST Micro circulated "version one" of the 8D report on June 25. The circulation email was to and from the same individuals and copied the same individuals.

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69. In the report, ST Micro indicated that its Viper chips had an acceptable failure rate, i.e., 50 to 100 PPM (0.005% or 0.01%). ST Micro indicated that it had analyzed the "process data of the involved lots and ones manufactured in the same period." ST Micro reported that there was "normal test yield for all of them." ST Micro also reported that "[n]o evidence of Final Test Low yield lots (G423119N – G423519M) was highlighted, so the lots are considered as belonging to typical FT population." These statements indicated that the Viper chips supplied to Cisco during the relevant period did not have abnormal failure rates. A failure rate above 0.01% is considered abnormal for this component.

- 70. In the report, ST Micro also discussed its proposed "permanent corrective action." ST Micro indicated that "[a]s a fast containment, baking process is added before cropping." ST Micro indicated that the "extra bake before cropping (24hrs/125°C) has been extended to all VIPER devices." Finally, ST Micro indicated that this action would "be maintained inside production flow until further trials on [standard] process or any other solution at molding compound level will be evaluated and confirmed effective." In neither the report nor transmittal email did ST Micro acknowledge that it knew the baking process had not been extended to all Viper chips and that it knew the baking process did not correct the latent defect.
- 71. On June 26, 2013, Cisco and ST Micro conducted a conference call to discuss the findings of the 8D report. Mike Woods, Mark Schutte, Sam Lim, Vino Mody, Scott Friedman, and Kav Kavia participated in the call for Cisco. Michael Cosson, Antonino Motta, Sergio Tommaso Spampinato, Fabio Salanitri, Marietta Axisa, Blancky Ho, William Chan, Perry Mason, Francesca Sandrini, Charlie Zhu, Sam Guo, and Davide Simone Trapani participated in the call for ST Micro.
- 72. During the conference call, Cisco and ST Micro discussed the 8D report, including the root cause analysis and proposed corrective action. Cisco stated that ST Micro needed to develop a precise test for symptoms of IDSS leakage and a test Cisco could use to identify potential Viper failures. Cisco stated it was critical to prevent any set top boxes containing Viper chips with bad date codes from being deployed in the field. Cisco also told ST Micro that it needed to ship large quantities of reliable (tested and defect-free) Viper chips as soon as possible. Cisco had a large backlog of orders caused by the Viper chip failures. In response, officers of ST Micro-US and ST

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Micro-Italy assured Cisco that the baking process (the proposed corrective action) solved the IDSS leakage issue. They also confirmed that the failure rate for the Viper chips was not above normal. And, they agreed that ST Micro would develop and implement a testing process to identify potential Viper failures. However, the officers refused to provide Cisco with the bad date codes and would not tell Cisco how many bad chips had already been shipped to Cisco.

- 73. ST Micro's acknowledgement of an IDSS leakage with the tested Viper chips was misleading and incomplete. Cisco formally notified ST Micro of the problem on June 10. The individuals communicating with Cisco regarding the Viper chip were either aware of the widespread IDSS leakage problem based on reports and analysis following the manufacturing changes; or, in the alternative, they obtained that information shortly after Cisco identified the set top failures as a problem on June 10, 2013. The ST Micro officers communicating with Cisco had 16 days to obtain that information and knowledge but elected to conceal it from Cisco. Instead, ST Micro represented that its Viper chips did not have an abnormal failure rate.
- 74. Cisco relied on ST Micro's representation regarding the failure rate for its Viper chips when deciding that it did not need to inform its customers of a potential systematic problem with its set top boxes at that time. Cisco relied on ST Micro to inform Cisco of whether there was a widespread problem or potential problem with the Viper chip. ST Micro did not inform Cisco of such a widespread problem or potential problem. To the contrary, ST Micro told Cisco that the failure rate was not abnormal. Cisco would have informed its customers of a potential systematic problem had ST Micro provided accurate information regarding its Viper chip.
 - C. ST Micro knowingly or negligently provided Cisco with inaccurate information regarding defective Viper chips and remediation actions (June 28, 2013).
- 75. The third step in ST Micro's disinformation was a misstatement. ST Micro lied to Cisco about which Viper chips were defective and not defective. ST Micro told Cisco that it had applied a baking process to all Viper chips date-coded 309 and above; and, that the baking process eliminated the contaminant in the HF resin that caused the IDSS leakage. That was not true, and was contrary to its representations to Cisco. ST Micro had not applied the baking process to all of these

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Viper chips. ST Micro knowingly lied to Cisco when it told Cisco that Viper chips date code 309 and above would not have the same IDSS leakage problem.

- 76. On June 28, 2013, ST Micro provided Cisco with a spreadsheet identifying defective and defect-free Viper chips. A true and correct copy of this spreadsheet is attached as Exhibit 12. Marietta Axisa sent the spreadsheet via email to several Cisco officers, including Vino Mody, Mark Penk, Kav Kavia, Yimin Liu, Jing Li, and Samer Kassis. Blancky Ho, William Chan, Sergio Tommaso Spampinato, Antonino Motta, Davide Simone Trapani, and Michael Cosson of ST Micro were also copied on the email. A true and correct copy of this email is attached as Exhibit 13. In the transmittal email, ST Micro stated that the attached spreadsheet identified, by date code, the Viper chip lots that were "affected" and "not affected" by the IDSS leakage issue. ST Micro also encouraged Cisco to copy the "ST internal team" on all communications related to the issue, including Michael Cosson, Antonino Motta, Sergio Spampinato, Davide Trapani, Blancky Ho, and William Chan.
- 77. Attached to the email was the long-awaited information from ST Micro regarding defective and defect-free Viper chips. The spreadsheet indicated that Viper chips date-coded 308 and below were potentially affected by the contamination that caused the IDSS leakage. The spreadsheet also indicated that the Viper chips date-coded 309 and above were not affected by the contamination caused by the IDSS leakage. The Viper chips date-coded 309 and above had purportedly gone through a baking process that eliminated the contamination caused by the HF resin, which ST Micro indicated was causing the IDSS leakage.
- 78. On June 28, 2013, Cisco and ST Micro had a conference call to discuss ST Micro's identification of defect-free Viper chips. Vino Mody, Mark Penk, Kav Kavia, Jing Li, and Samer Kassis participated in the call for Cisco. Antonino Motta, Marietta Axisa, and Michael Cosson participated in the call for ST Micro. On information and belief, Sergio Tommaso Spampinato and Davide Simone Trapani also participated in the call for ST Micro.
- 79. During the conference call, Cisco told ST Micro that it was going to initiate manufacturing, repairs, and reworks based on the information provided in the spreadsheet. Cisco told ST Micro that it was relying on that data. First, officers from ST Micro-US and ST Micro-Italy

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confirmed that the information provided in the spreadsheet was accurate and reliable. explained that all of the Viper chips with date codes 309 and above had gone through the baking process that fixed the IDSS leakage problem. Second, officers from ST Micro-US and ST Micro-Italy confirmed that Cisco could use Viper chips with date codes 309 and above for manufacturing and repairing set top boxes. They confirmed that these Viper chips did not have the IDSS leakage problem that rendered earlier chips defective and potentially defective. Third, on information and belief, officers from ST Micro-US and ST Micro-Italy confirmed that the failure rate for Viper chips was not abnormal and within normal limits, i.e., 50 to 100 PPM (0.005% to 0.01%).

- 80. On July 25, 2013, ST Micro provided one of Cisco's manufacturers (AMC) with another Customer Complaint Report. On information and belief, the report was circulated by Davide Simone Trapani. The report was approved by two Participating Officers from ST Micro-Italy: Sergio Spaminato and Antonino Motta. On information and belief, these ST Micro officers understood that the information in this report would be provided to Cisco and would impact manufacturing of Cisco's set top boxes. A true and correct copy of the report is attached as Exhibit 15.
- 81. In the report, ST Micro affirmed its use of the baking process and reliability of its Viper chips. ST Micro stated that its traceability system indicated that "process data of the involved lots and ones manufactured in the same period" had "normal test yield for all of them." ST Micro also stated that there was "[n]o evidence of Final Test Low yield lot" so "the lot is considered as belonging to typical FT population." These statements by ST Micro indicated that the Viper chips did not have abnormal failure rates. A failure rate above 0.01% is considered abnormal for this component.
- 82. In the report, ST Micro also affirmed that the Viper chips date-coded 309 and above "are considered safe and can be released." The reason, again, was because ST Micro had purportedly applied the baking process to these chips. ST Micro assured that the "extra bake before cropping (24hrs/125°C) has been extended to all VIPER devices." And, ST Micro assured that this action would "be maintained inside production flow until further trials on standard process or any other solution at molding compound level will be evaluated and confirmed effective."

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83. Cisco relied on ST Micro's representations to restart manufacturing of new set top boxes, repairs to failed set top boxes, and reworks of existing set top boxes. In a subsequent work instruction, a true and correct copy of which is attached as Exhibit 14, Cisco explained that "[a] combination of process and plant changes resulted in Viper PWM chips that fail causing failure in the AMC PSU used in the Cisco 3410 DVB STB." Cisco went on to explain that, according to ST Micro, "all Viper production by ST [since Week 9 of 2013] has been produced under a process change that virtually eliminates the problem." And, that "ST has identified which date codes/trace codes are impacted" by the defect. Cisco then instructed its manufacturers how to purge the defective Viper chips, inspect incoming shipments, and use the defect-free Viper chips for manufacturing, repairs, and reworks.

84. Cisco also relied on ST Micro representations when providing updates and communications with its customers. Cisco's customers had been experiencing field failures with the set top boxes for months due to the Viper chip defect. Cisco explained to its customers that the cause of the set top failures had been identified and corrected. Cisco indicated that it would be manufacturing new set top boxes and repairing failed set top boxes that were not susceptible to the same power failure. Cisco would not have made these representations to its customers but for ST Micro's assurances regarding the Viper chips date-coded 309 and above as well as its assurance regarding the normal failure rate for other Viper chips.

ST Micro acknowledged providing Cisco inaccurate information regarding D. defective Viper chips (August 2013).

85. Two months later, in August 2013, ST Micro admitted that the information it provided Cisco regarding defective and defect-free Viper chips was not accurate. In late August 2013, Cisco determined that the set top boxes being repaired and manufactured using Viper chips date-coded 309 and above were also failing for the same reasons as before. The Viper chips that ST Micro indicated had been produced using a new process that supposedly eliminated the problem were, in fact, still defective. The reason: ST Micro did not universally apply the baking process to the more recently manufactured Viper chips, which ST Micro represented to Cisco had been done.

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86. On August 23, 2013, Cisco and ST Micro had a conference call to discuss failures Cisco observed with Viper chips date-coded 309 and above. Richard Marszalik, Vino Mody, Yimin Liu, Nan Wang, and Samer Kassis participated in the call for Cisco. Charlie Zhu, Michael Cosson, William Chan, Fabio Salanitri, Antonino Motta, and Angelo D'Arrigo participated in the call for ST Micro.

- 87. During the call, Cisco explained that it was concerned that the Viper chips date-coded 309 and above suffered from the same defect as earlier chips. The Participating Officers stated that they had done an initial analysis of a Viper chip date-coded 315 that was used in one of the set top boxes that had failed. They admitted that the Viper chip had excessive IDSS leakage. They then promised Cisco they would provide revised failure data for Viper chips date-coded 308 and below, 309 to 322, and 323 and above. They also promised to provide Cisco with a new factory test plan to enhance the baking process for the Viper chips and to screen out the IDSS leakage issue.
- 88. On August 26, 2013, Richard Marszalik (Cisco) visited the Foxconn facility that was manufacturing set top boxes with the Viper chips. During the visit, Foxconn identified another Viper chip (date-coded 309) that failed. The failed unit worked for 142 hours in ORT before the reset issue occurred, which was indicative of IDSS leakage. The case temperature of the Viper chip was also unusually high at reset (114° C). Marszalik observed the same problem with other Viper chips date-coded 309, 314, and 315. In each case, the set top box worked in ORT for a number of hours and then the Viper reset issue occurred due to IDSS leakage.
- 89. Marszalik (Cisco) discussed these problems with Antonino Motta (ST Micro-Italy) that same day. During this conversation, Motta admitted, for the first time, that ST Micro did not actually apply the baking process to all Viper chips date-coded 309 and above. Instead, ST Micro only applied the baking process to a random sampling of Viper chips. Motta also admitted that he did not even know which new date codes were subjected to the baking process.
- 90. Marszalik (Cisco) also reported his findings to ST Micro in an email. A true and correct copy of this email is attached as Exhibit 16. He emailed a summary to Angelo D'Arrigo, Antonino Motta, William Chan, Fabio Salanitri, Michael Cosson, and Charlie Zhu. Cisco stated that it was "very surprised to learn that a random sample of Viper date codes 309 via 320 were processed

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with your original proposal: Bake at 125C. What this means is that some of these unprocessed 309 to 320 date codes will have the same IDSS issue which was discovered in pre 309 date codes: Vipers re-setting due to excessive IDSS." Cisco also explained that it needed "new viper date code samples which were 100% treated so that we can establish a viable data point if your proposal fixes your reset issue."

- 91. On August 27, 2013, Richard Marszalik (Cisco) met with Antonino Motta and his staff of engineers in Shenzhen at AMC, a power supply unit vendor for Cisco. During this meeting, Cisco and ST Micro discussed the failure rates for the Viper chips. On information and belief, the tested Viper chips date-coded 252 to 300 had a 90% failure rate. The tested Viper chips date-coded 301 to 308 had a failure rate of 60%. The Viper chips date-coded 309 to 320 were supposed to have fixed the reset issue. However, during the meeting, ST Micro again acknowledged that some of these date codes were suspect because they were not subjected to the bake process, as ST Micro had previously represented. Cisco and ST Micro discussed that the failure rate for the tested Viper chips date-coded 309 to 320 was 1.2%.
- 92. On information and belief, the Participating Officers knew or should have known these failure rates before or shortly after June 10, 2013. ST Micro performed or should have performed risk and failure testing on its Viper chips prior to shipping based on, among other things, industry standards and its knowledge of prior defects with these chips (as discussed above). Moreover, ST Micro performed or should have performed risk and failure testing on its Viper chips after Cisco notified ST Micro of the Viper chip failures on June 10, 2013. ST Micro had this duty and responsibility based on industry standards and its representation to Cisco that it would assist with an investigation into the Viper chip defects and would provide complete and accurate information regarding the Viper chip.
- 93. During the August 27 meeting, the Participating Officers proposed a new corrective action for the IDSS leakage. They proposed baking the Viper chips at 150°C. They stated that they were "very confident" that the new processed Viper chips would have a very low failure rate. Foxconn and AMC agreed to perform Operational Reliability Testing ("ORT") on these new fully processed Viper chips. They likewise agreed to perform ORT testing on these newly processed

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chips. Cisco asked ST Micro-US and ST Micro-Italy to send a letter from upper management ensuring that the Viper chips will perform per their specifications, be reliable, and have no failure rate.

- 94. On August 27, 2013, Cisco and ST Micro also had a conference call to discuss the new revelation that ST Micro had not been uniformly applying the baking process. Nan Wang, Yimin Liu, Richard Marszalik, and Vino Mody participated in the call for Cisco. Charlie Zhu, Angelo D'Arrigo, Michael Cosson, Antonino Motta, William Chan, and Fabio Salanitri participated in the call for ST Micro.
- 95. During the call, the Participating Officers again acknowledged that the Viper chips date-coded 309 and 315 that had been recently tested had the same IDSS leakage as the early chips. The Participating Officers also again acknowledged that the baking process was not done consistently on the Viper chips date-coded 309 to 320, despite its prior contrary representation. They stated that the baking process, in fact, had been stopped altogether at one time. Finally, they indicated that it would implement a new test plan to enhance the baking process.
- 96. On August 28, 2013, Cisco and ST Micro had a conference call to discuss ST Micro's latest root cause analysis. Nan Wang, Yimin Liu, Richard Marszalik, and Vino Mody participated in the call for Cisco. Charlie Zhu, Angelo D'Arrigo, Michael Cosson, Antonino Motta, William Chan, and Fabio Salanitri participated in the call for ST Micro.
- 97. During the call, Cisco asked ST Micro-US and ST Micro-Italy to send Cisco a formal letter affirming that the new manufacturing process being proposed by ST Micro would improve the reliability of the Viper chips without sacrificing regression. The Participating Officers agreed to provide this letter by September 1, 2013. They also agreed to complete the regression analysis by August 30. Finally, they explained that it was doing trial testing to evaluate the effectiveness of its new baking process using Viper chips date-coded 334. They indicated the testing would be completed that week.
- 98. On August 29, 2013, Cisco and ST Micro had a conference call to discuss ST Micro's latest root cause analysis. Nan Wang, Yimin Liu, Richard Marszalik, and Vino Mody participated in

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the call for Cisco. Charlie Zhu, Angelo D'Arrigo, Michael Cosson, Antonino Motta, William Chan, and Fabio Salanitri participated in the call for ST Micro.

- 99. During the call, the Participating Officers presented more analysis of the failures of the Viper chips date-coded 309 and 315. They acknowledged the IDSS leakage problem but indicated that they had not yet identified a root cause. The Participating Officers from ST Micro-US and ST Micro-Italy also agreed to escalate the root cause analysis to a higher level of ST Management to accelerate the process. They promised to complete a failure regression analysis for the previously shipped Viper chips and to provide a formal letter for Cisco acknowledging the failure. Finally, they indicated that they were still running a trial test to determine the effectiveness of the new proposed baking process.
- 100. On August 30, 2013, ST Micro provided Cisco the previously promised failure rate analysis. The analysis was summarized in a PowerPoint presented by ST Micro. A true and correct copy of this PowerPoint is attached as Exhibit 17. ST Micro now indicated that the failure rate for Viper chips date-coded 309 to 320 was 345 to 576 PPM (0.035% to 0.058%). This failure rate was significantly greater than ST Micro's prior representation, represented an abnormal failure rate, and exceeded an acceptable level for Cisco.
- 101. On information and belief, the Participating Officers knew or should have known this failure rate before or shortly after June 10, 2013. ST Micro performed or should have performed risk and failure testing on its Viper chips prior to shipping based on, among other things, industry standards and its knowledge of prior defects with these chips (as discussed above). Moreover, ST Micro performed or should have performed risk and failure testing on its Viper chips after Cisco notified ST Micro of the Viper chip failures on June 10, 2013. ST Micro had this duty and responsibility based on industry standards and its representation to Cisco that it would assist with an investigation into the Viper chip defects and would provide complete and accurate information regarding the Viper chip.
- 102. On September 13, 2013, ST Micro provided Cisco another PowerPoint presentation summarizing how it planned to change the manufacturing of the Viper chip in light of the unacceptable failure rate for chips date code 309 to 320. A true and correct copy of this PowerPoint

is attached as Exhibit 18. ST Micro started by reaffirming to Cisco that its core team for Cisco and the Viper issue included Antonino Motta, Tommaso Spampinato, Angelo D'Arrigo, Luigi Areuri, Max Saponaro, Alceo Paratore, Giacome Mercadante, Michael Cosson, William Chan, and Marietta Axisa.

103. ST Micro then acknowledged it had to change the manufacturing process for the Viper chip. ST Micro indicated it would start to (a) use a thicker BPSG, (b) make the HF molding compound compatible for HV application by introducing a new baking process, and (c) use a more compatible HF molding compound.

104. On *September 19, 2013*, ST Micro provided Cisco a Customer Complaint Report (8D) regarding two of the failed Viper chips. *See, supra*, Ex. 3. The report was approved by two of the Participating Officers from ST Micro-Italy: Sergio Spaminato and Antonino Motta. ST Micro concluded that the Viper chips date-coded 309 and 315 suffered from the same root cause defect as the earlier chips. ST Micro determined that "[f]ailing devices showed increasing of IDSS, causing the re-boot on STB application during the Customer ORT reliability stress test." "According to the analysis results and failure mode observed, the most probable root cause is due to the effect of charges present in the molding compound and migrating inside the gate area under the thermal and electrical effect."

105. The Participating Officers knowingly provided Cisco false information on June 28, 2013, regarding the Viper chips date-coded 309 and above. The chips had already been manufactured by ST Micro. The Participating Officers knew ST Micro had not applied the baking process to these chips. The Participating Officers either knew the baking process had not been applied because they directed and received reports regarding the manufacturing process of these chips; or, in the alternative, they learned from the ST Micro officers involved in the manufacturing process that the baking process had not been uniformly applied. The Participating Officers made the misrepresentation to Cisco months after the chips had been manufactured and nearly 20 days after Cisco notified ST Micro of the problem. The officers communicating with Cisco knew how the Viper chips had been manufactured.

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106. ST Micro's inaccurate information regarding the Viper chips date-coded 309 and above required Cisco to shut down manufacturing, repairs, and reworks as well as restart the screening process. ST Micro's failures at this point fell into three general buckets. First, ST Micro misrepresented the reliability of the Viper chips date-coded 309 and above. Second, ST Micro had failed to identify the root cause of the IDSS leakage notwithstanding knowing of the problem for months. Third, ST Micro had failed to provide Cisco sufficient documentation demonstrating that the proposed baking process would be an effective containment solution. The cumulative effect of these failures required Cisco to start over with its own containment and remediation efforts.

107. Moreover, ST Micro's inaccurate information regarding the Viper chips injured Cisco's credibility and relationship with customers. Cisco informed its customers that the set top failure issue had been resolved after receiving assurances from ST Micro regarding affected and unaffected date codes. Cisco informed its customers that they would receive functional set top boxes that could be deployed to their consumers. However, many of the set top boxes shipped to customers had the same flaw as before because they included defective and potentially defective Viper chips.

ST Micro failed to confirm that its Viper chips were not defective or potentially Ε. defective (September to October 2013).

108. Cisco's confidence in ST Micro wavered following the discovery that the Viper chips date-coded 309 and above had not gone through the baking process and suffered from the same potential defect as earlier manufactured chips. Accordingly, Cisco repeatedly asked the Participating Officers to provide assurances and tests demonstrating that its newest process for manufacturing the Viper chip would not have the same defect. ST Micro could not do so. As a result, Cisco once again had to revise and shut down its manufacturing, repair, and rework process.

109. On September 11, 2013, Cisco sent an email to ST Micro regarding problems with supplying customers. The email was sent by Richard Marszalik (Cisco) to Antonino Motta (ST Micro-Italy) and Marietta Axisa (ST Micro-US). A true and correct copy of this email is attached as Exhibit 19. In the email, Cisco informed ST Micro that it was "in a desperate situation" and had "a <u>lot</u> of customers waiting." Cisco was concerned because "ST doesn't have a reliable product to

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support our high demand." Cisco also wanted to know whether ST Micro had stopped production of the Viper chip because Cisco was faced with a shipping crisis among its customers.

On September 17, 2013, Cisco sent ST Micro an email requesting a better screening 110. process for the Viper chips. A true and correct copy of this email is attached as Exhibit 20. The email was sent by Richard Marszalik (Cisco) to Antonino Motta (ST Micro-Italy). The email was copied to, among others, Marietta Axisa, Michael Cosson, and Perry Mason (ST Micro-US). In the email, Cisco stated that "[i]f the bake process starts failing at some later date {since we don't understand if regression will happen} at worse case we will be in the same situation as we are now: no correlation between HTRB & ORT. ST engineering needs to come up with a much better screen than their proposed HTRB." Cisco also stated that ST Micro "need[s] to do 100% screening on all their viper17 to ensure no factory escapes from Longgang." And, Cisco stated that this "100% screen is absolutely necessary since no official root cause failure analysis has been published by ST." Cisco urged ST Micro "to come up with a better screen than . . . HTRB."

- 111. On September 26, 2013, Richard Marszalik visited CTDI in Gurgaon, India. CTDI was performing extensive Viper screening for Cisco. CTDI had observed odd behavior with one of the set top boxes during its Viper screen test. The input power measurement was deviating between 4.8W to 6.8W. While Marszalik discussed with CTDI how to further test the issue, the Viper chip violently failed. The chip cracked horizontally with the silicon and DC still in place. The date code on the Viper chip was 320, which meant it was one of the Viper chips that should have undergone ST Micro's new baking process with no failures.
- 112. Marszalik informed ST Micro of this problem on the same day. He sent an email to several ST Micro officers, including Michael Cosson, Perry Mason, Charlie Zhu, Angelo D'Arrigo, Sergio Tommaso Spampinato, Luigi Arcuri, Max Saponaro, Blancky Ho, William Chan, Marietta Axisa, Aymeric Gisselbrecht, and Antonino Motta. A true and correct copy of this email is attached as Exhibit 21. After explaining the failure he had observed with the Viper chip date-coded 320, Marszalik explained that "the nature of this failure was the same as the N=3 PS'S which Anna [Liu] from AMC sent to you for failure analysis," referring to the defective Viper chips he had previously flagged for ST Micro on September 5, 2013. He also told ST Micro that CTDI had randomly taken a

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sample of 1,000 failed set top boxes that came from consumer homes and 169 had "the same violent viper symptom" as he had personally observed. In response, ST Micro (D'Arrigo) stated: "I am very sorry for these [sic] bad news."

- 113. On October 7, 2013, Cisco and ST Micro had a conference call to discuss the Viper issue. Vino Mody, Linda Swago, Jing Li, Darren Lin, Gary Sim Wei Siang, Devang Shah, Mark Bradford, Sam Lim, and Gerald Yang participated for Cisco. Michael Cosson and Charlie Zhu participated for ST Micro. On information and belief, ST Micro shipping schedule personnel also participated on the call.
- 114. During the call, Cisco told the Participating Officers that it had a current high demand for Viper chips to satisfy customer backlog. Cisco explained the backlog was caused by returns/repairs as well as an inability to manufacture at the required pace for new demand because of Viper uncertainty. The Participating Officers told Cisco about its production supply for Viper chips date-coded 334 and higher. They also assured Cisco that all Viper chips date-coded 334 and higher underwent the baking process.
- On October 9, 2013 (morning), Cisco and ST Micro had a conference call to discuss the Viper issue. Vino Mody, Linda Swago, Jing Li, Darren Lin, Gary Sim Wei Siang, Devang Shah, Mark Bradford, Sam Lim, and Mark Still participated for Cisco. Michael Cosson, Luca DiFalco, and Maria-Rosa Borghi participated for ST Micro. During the conference call, Cisco told the Participating Officers about its October production schedule and the need for close to half a million Viper chips to handle the backlog of customer orders, repairs, and reworks. Cisco also explained that it could not miss its production schedule based on lingering problems with the Viper chip. However, during and after this call, the Participating Officers would not provide Cisco with the assurances and test results necessary to show that the Viper chips would be manufactured and screened in a way to ensure that they did not fail due to IDSS leakage.
- 116. On October 9, 2013 (afternoon), Cisco and ST Micro had a conference call to discuss the Viper issue. Scott Friedman, Thomas Baker, Vino Mody, Sam Lim, Mark Bradford, Pari Pham, and Mark Schutte participated in the call for Cisco. Perry Mason, Michael Cosson, Matteo Lo Presti, Luca DiFalco, and Aymeric Gisselbrecht participated in the call for ST Micro. During the

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call, Cisco again told the Participating Officers that it needed assurances regarding the reliability of the Viper chips. However, during and after this call, the Participating Officers would not provide Cisco with the assurances and test results necessary to show that the Viper chips would be manufactured and screened in a way to ensure that they did not fail due to IDSS leakage.

117. By mid-October 2013, ST Micro had still failed to provide Cisco any documentation or testing substantiating that its Viper chips were being manufactured in a manner that eliminated the IDSS leakage problem. Cisco's customers were demanding faster screening and repair of defective set top boxes as well as demanding Cisco supply new set top boxes that would not fail. However, Cisco did not have a supply of Viper chips that it could reliably use to satisfy customer demand. ST Micro did not (or could not) provide Cisco with a supply of Viper chips to support mass production of set top boxes as well as required repairs. Thus, Cisco again had to suspend its manufacturing and repair operations, notwithstanding customers' demands. Cisco did not have reliable Viper chips.

ST Micro compounded Cisco's customer relations problems by spreading false F. information regarding its Viper chips.

- 118. Cisco's credibility and relationship with its Indian cable customers were severely injured as a result of ST Micro's negligence and misrepresentations. ST Micro's inability to manufacture Viper chips without IDSS leakage problems was the first problem. Cisco's customers received set top boxes that failed at an unacceptable rate, which led them to experience a high level of consumer returns. Cisco was then unable to provide customers replacement and new set top boxes at an acceptable rate because ST Micro could not provide reliable chips and ST Micro could not provide adequate assurances regarding its Viper chips. ST Micro's negligence, thus, created customer relations issues for Cisco.
- 119. The Participating Officers' false representations to Cisco was the second problem. Unknown to Cisco, the Participating Officers provided Cisco inaccurate information regarding its Viper chip. ST Micro's representations to Cisco led Cisco to tell its customers that the set top failure problem was limited and had been resolved when in truth, the problem was not limited and had not been resolved. Cisco would never had made its assurances to customers had the Participating

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Officers provided accurate information regarding the Viper chip as opposed to inaccurate information. However, from the perspective of Cisco's customers, the false assurances were coming from Cisco. Customers blamed Cisco for providing false information.

- 120. ST Micro's false representations regarding its product to the Indian cable companies was the third problem. In fall 2013, Cisco learned that ST Micro had been spreading false information regarding its Viper chips. ST Micro markets its products to the same cable companies that purchase Cisco's set top boxes. ST Micro's objective is to persuade companies, including the Indian cable companies, to request and instruct their suppliers to use ST Micro parts in the products they provide. The business model involves ST Micro persuading the cable company to instruct its supplier (e.g., Cisco) to use parts manufactured by ST Micro (e.g., the Viper chip) in the products (e.g., set top boxes) made for the cable company.
- 121. In the course of marketing its products to the Indian cable companies, one or more ST Micro or ST Micro-India's sales representative(s) told Cisco's customers that there were no problems with the Viper chip. Specifically, the ST Micro sales representative(s) told Cisco's customers that the Viper chip was not defective. On information and belief, the ST Micro sales representative(s) made these statements to bolster ST Micro's reputation and prospects of obtaining future business involving the cable companies. The cable companies would not want a supplier to use an ST Micro product if ST Micro was responsible for manufacturing a defective product.
- 122. Cisco learned about ST Micro's false statements regarding the Viper chip first-hand during a meeting with one of its largest customers, GTPL. In October 2013, Cisco met with GTPL to discuss the set top failures. Mark Bradford, Jason Chao, and Sandeep Arora participated in the meeting for Cisco. Shaji Mathews (COO), V. Guru Prasad (Senior Vice President - Technical), and Subrata Bhattacharya (Vice President - Technology) participated in the meeting for GTPL.
- 123. During the meeting, GTPL (Mathews) told Cisco that ST Micro had informed GTPL that there was no problem with its Viper chips, that the set top box quality issues were Cisco's fault, that any representation from Cisco to the contrary was incorrect, and that Cisco was dumping shoddy products in India. GTPL (Matthews) also stated (in effect): "if you (Cisco) really had a Viper problem, you could tell us the serial numbers of the set top boxes that were affected. So either Cisco

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does not have good control over its manufacturing processes, or you are lying to me. Which is it, Mr. Bradford?"

124. GTPL's comments to Cisco were consistent with the feedback Cisco received from its other customers. ST Micro's inability to manufacture a Viper chip that was not susceptible to IDSS leakage, and its misrepresentations to Cisco regarding its Viper chips, had cost Cisco its credibility with customers. Customers blamed Cisco for ST Micro's failures. Customers also blamed Cisco for assuring them (based on ST Micro's representations) that the set top problem had been solved and was limited in scope when it was not. The fact that ST Micro further told customers, like GTPL, that its Viper chip was not the problem compounded the problems for Cisco.

G. ST Micro finally acknowledged full responsibility for its defective Viper chips.

- 125. Cisco informed ST Micro of the problems created by its handling of the defective Viper chips. At first, ST Micro refused to acknowledge that its chip was the sole or primary cause of the set top failures notwithstanding the results of its own failure analysis and reports provided by Cisco. Finally, in late November and December, ST Micro admitted that its Viper chip was the root cause of the set top failures and that it was responsible for the problems experienced by Cisco and, ultimately, Cisco's customers.
- On *November 4, 2013*, Cisco and ST Micro participated in a conference call. Sam 126. Lim and Scott Friedman participated in the call for Cisco. Fabio Gualandris participated in the call for ST Micro. Gualandris was an Executive Vice President, Product Quality Excellence, with the parent company, STMicroelectronics N.V. During the call, Gualandris promised to provide an "official communication" by ST Micro acknowledging the Viper problem. Gualandris promised to ST Micro did not provide the "official provide the communication within "48 hours." communication" within the 48 hours as promised.
- 127. On *November 12, 2013*, ST Micro provided a draft of its statement acknowledging responsibility. Aymeric Gisselbrecht circulated the first draft. Several ST Micro officers, including Brian Mielewski, Fabio Gualandris, Perry Mason, and Michael Cosson, were copied on the email. A true and correct copy of this email is attached as Exhibit 22. ST Micro's draft statement read: "STMicroelectronics manufactured some lots of the Viper device containing parts with higher than

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expected levels of IDSS. The problem has been resolved, but, unfortunately, some of the lots with higher leakage were released to customers and ended up in Cisco's products. As detailed in our specific 8D reports these parts may induce failure in Cisco's products. The Viper contribution to Cisco's failures is recognized although it needs to be assessed on a case-by-case basis." ST Micro's draft statement was not acceptable to Cisco.

- 128. On November 14, 2013, Cisco and ST Micro met to discuss ST Micro's statement and ongoing Viper production and screening. Sam Lim and others participated in the meeting for Cisco. Fabio Gualandris and others participated in the meeting for ST Micro. During the meeting, ST Micro refused to discuss the specifics of the statement and told Cisco to discuss it with Aymeric Gisselbrecht. However, Gualandris acknowledged that mistakes were made by ST Micro. He stated that ST Micro's lack of a thorough and timely response to the Viper chip issue was not acceptable. He also stated that as a result of ST Micro's poor response, ST Micro had replaced (fired, terminated, or transferred) the Quality Director who was Cisco's primary point of contact.
- 129. On *November 26*, *2013*, ST Micro finally agreed to a more complete (but not entirely statement acknowledging responsibility. complete) ST Micro's final statement "STMicroelectronics manufactures the Viper17LN chip used in the power supply module of Cisco's 3410DVB set top box. Some lots of the Viper17LN device (specifically lots with date codes 229 to 314) have a higher failure rate. The Viper17LN chip manufacturing problem has been resolved, but, unfortunately, some of the lots with the higher failure rate were released to customers and some were used in Cisco's products. As detailed in our specific 8D reports, when these parts fail, they induce a failure in Cisco's product. The Viper17LN contribution to Cisco's 3410DVB failures is acknowledged." A true and correct copy of this statement is attached as Exhibit 23.
- Nonetheless, in discussions with Cisco, ST Micro continued to refuse to acknowledge that its Viper chip was the sole root cause for the set top failures. ST Micro continued to assert that other factors contributed to the set top failures so that blame did not rest entirely with ST Micro. According, Cisco scheduled a visit for ST Micro's engineers to demonstrate that the Viper chip was the sole cause of the set top failures. The objective was to demonstrate to the engineers that Viper

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chips with a broad date code of production were defective due to IDSS leakage and the Viper chip was the sole cause of set top failures. That visit took place in early December.

- 131. On *December 2, 2013*, Cisco and ST Micro met to conduct tests on the Viper chips. Richard Marszalik and Wei Qin participated in the meeting for Cisco. Marcello Cicchetti (ST Micro-Italy), Mirko Sciortino (ST Micro-Italy), Claudio Mazzurco (ST Micro-Italy), and Harjeet Singh (ST Micro-India) participated in the meeting for ST Micro. ST Micro represented that these officers were knowledgeable about the Viper chip issue and set top failures. The meeting took place at CTDI in Gurgaon, India.
- 132. During this meeting, CTDI provided 155 set top boxes that were rebooting and/or failing due to power issues. The set top boxes included power supply units with Viper chips having a broad date code range. Cisco's power meter measures indicated that these units were rebooting due to IDSS leakage with the Viper chip. ST Micro independently evaluated the chips. ST Micro confirmed that all of the set top boxes (155 of 155) rebooted due to IDSS leakage with the Viper chip.
- 133. Cisco and ST Micro also performed testing on Viper chips with excessive IDSS leakage. Cisco and ST Micro randomly selected 30 Viper units with a range of date codes. The units were powered up at room ambient temperature (23°C) with nominal AC input with Set Top Box Load. The testing showed a failure rate of 97%, with 29 out of 30 units failing. Specifically, 22 of the Viper chips exploded during the testing, seven of the Viper chips failed internally but did not explode, and one of the Viper chips functioned properly. Based on these tests, ST Micro could no longer deny that its Viper chip was the sole cause of the set top failures.
- 134. Following this test, *later in December 2013*, Cisco and ST Micro visited GTPL to confirm that ST Micro's Viper chip was the root cause of the set top failures. The meeting with GTPL took place in GTPL's offices in Ahmedabad, India. Mark Bradford, Joe Chow, Sandeep Arora, and Joe Cozzolino participated for Cisco. Shaji Mathews (COO), V. Guru Prasad (Senior Vice President - Technical), and Subrata Bhattacharya (Vice President - Technology) participated for GTPL. Vivek Sharma (ST Micro India) participated on behalf of ST Micro. ST Micro represented that Sharma was knowledgeable about the Viper issue and could speak on its behalf.

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135. During the meeting, Sharma delivered a message on behalf of ST Micro that the Viper problem was ST Micro's fault. Sharma told GTPL that ST Micro was responsible for the set top box quality issues. He stated that the quality problem was with ST Micro's Viper chips, and that ST Micro had delivered defective chips to Cisco through the supply chain. Sharma said (in effect): "in fact, the Viper chip did have a problem, and any statement by any ST Micro representative to the contrary was incorrect." He also stated that ST Micro had no reason to believe that Cisco had quality problems.

- 136. On *December 19*, 2013, ST Micro sent Cisco a final PowerPoint presentation summarizing its responsibility for the defective Viper chips and failed set top boxes. See, supra, Ex. 4. The report was sent by Michael Cosson. A true and correct copy of this email is attached as Exhibit 24. Aymeric Gisselbrecht, Brian Mielewski, Perry Mason, and Fabio Gualandris of ST Micro were also copied on the email transmitting the PowerPoint.
- 137. The PowerPoint acknowledged ST Micro's responsibility for the Viper chip issue and its improper reaction to the situation. ST Micro acknowledged that "time to solution was too long" from ST Micro's knowledge of the Viper defect to implementing a reasonable solution. ST Micro also acknowledged that the IDSS leakage for the Viper chip had "been generated by a lack of risk analysis (incomplete FEMA) on critical process differences during the [assembly] process transfer (Shenzhen vs Long Gang with Green mold compound)." ST Micro also acknowledged that "the potential charging of Power MOS due to ionic contamination, vs. the critical differences among the wafer fabs (i.e., BPSG) was not considered. This resulted in a partial qualification (no biased trials) allowing the escape of an intrinsic weakness."

H. ST Micro's negligence and misrepresentations caused considerable damage to Cisco.

- 138. After months of denials and misrepresentations, ST Micro's acknowledgement of the Viper chip defect and the root cause of the defect came too late. By December 2013, ST Micro had already done significant financial damage to Cisco and irreparable reputational harm.
- 139. First, Cisco's customers demanded a variety of concessions during the relevant period, which cost Cisco tens of millions of dollars. Cisco would not have been required to make

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these concessions had it not been for ST Micro's negligence and misrepresentations. Second, Cisco could not charge its customers for replacing set-tops containing Viper chips with affected date code. This meant Cisco spent money manufacturing and shipping defective boxes that it could not sell. Third, Cisco's customers refused to clear customs on any further shipments from Cisco. These shipments languished at customs, generating storage costs that Cisco ended up paying before it was forced to collect those products from customs and incurring further shipping and transportation costs.

- 140. Yet, customer confidence was a greater loss for Cisco. Cisco's customers were irate as a result of the failures caused by ST Micro. Cisco's customers believed Cisco either was lying to them or simply did not know what it was doing. Neither of these options was acceptable. As a result of ST Micro's negligence and misrepresentations, and the steps Cisco took in reliance on these misrepresentations, Cisco's customers lost confidence in Cisco and its ability to rectify the problem. Cisco's customers were no longer willing to buy set-top boxes from Cisco.
- 141. Order cancellation of the 3410DVB series was pervasive. Cisco was left with millions of dollars of set-top box raw materials it had purchased based on then-existing orders and sales forecasts. Not only did customers cancel their existing orders—resulting in debookings—they refused to place new orders for the 3410DVB series. Cisco's set-top box business in India dried up almost instantly after this second wave of defective Viper17LN chips. Cisco lost existing and future business for its successful 3410DVB as a result of ST Micro's negligence and misrepresentations.
- 142. Cisco also lost sales of its next-generation set top box (the 3510DVB) with customers who were affected by the contaminated chips. Prior to ST Micro's misconduct, Cisco had been developing the 3510DVB, had already ordered raw materials required to manufacture this product, and had begun arranging sales of this product with its customers. After ST Micro's misconduct, Cisco's customers indicated that they would not be placing orders for Cisco's 3510DVB due to their lack of confidence in Cisco stemming from ST Micro's various misrepresentations. ST Micro's misrepresentations cost Cisco these sales.
- 143. The injuries and damages discussed above were the intended and reasonably foreseeable consequences of ST Micro's actions and omissions. The Participating Officers knew of

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Cisco's existing and prospective business relationships with Indian cable companies. relationships were discussed before and during the communications at issue in the Third Amended Complaint. The Participating Officers also know the damage that would be done to those business relationships if Cisco could not readily correct the set top failures and/or communicated inaccurate information to customers. This too was discussed during the communications at issue in the Third Amended Complaint.

With this knowledge and understanding, the Participating Officers agreed to conceal 144. the latent defects with the Viper chips, provide Cisco inaccurate information regarding the Viper chips, stall the implementation of corrective action, refuse to provide Cisco confirmatory information, and delay acceptance of responsibility. The Participating Officers engaged in this action with the understanding that it would disrupt Cisco's ability to maintain and grow relationships with the Indian cable customers. And, they engaged in this action with the understanding it would irreparably harm Cisco's reputation with those customers as well as end users in the Indiana market.

IV. THE PARTICIPATING OFFICERS CONSPIRED TO DEFRAUD CISCO.

145. The Participating Officers conspired to conceal the latent defects in the Viper chips from Cisco and provide Cisco inaccurate information regarding the latent defect in the Viper chips. The conspiracy started with three officers and eventually grew to include, at least, 19 officers of ST Micro-US, ST Micro-Italy, and ST Micro-China. The Participating Officers formed the conspiracy because they believed it was in ST Micro's financial interest to deflect blame for the set top failures from ST Micro to Cisco. They also formed the conspiracy because they believed ST Micro's reputation and potential future business with Cisco would be damaged by acknowledging the truth. The allegations below are based on information and belief.

146. The conspiracy began on or about June 10, 2013. At that time, Perry Mason recruited Michael Cosson and Charlie Zhu to join the conspiracy. These Participating Officers were aware of the latent defect with the Viper chip, the associated failure rate, the root cause of the failure, and the Viper chip's role in causing set top failures. However, they agreed to conceal that information from Cisco and provide Cisco with inaccurate information regarding the defect.

147. The conspiracy expanded to, at least, 11 officers by June 19. Between June 10 and

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June 19, one or more of the existing members of the conspiracy recruited Maria-Rosa Borghi, Antonino Motta, Fabio Salanitri, Francesa Sandrini, Sergio Spampinato, William Chan, Sam Guo, and Blancky Ho to join the conspiracy. These Participating Officers were aware of the latent defect with the Viper chip, the associated failure rate, the root cause of the failure, and the Viper chip's role in causing set top failures. However, they agreed to conceal that information from Cisco and provide Cisco with inaccurate information regarding the defect.

- During this stage of the conspiracy, the Participating Officers agreed to defraud Cisco 148. through an omission. The Participating Officers knew ST Micro had promised to provide Cisco complete and accurate information regarding its Viper chip after Cisco sought ST Micro's assistance in early June. However, the Participating Officers executed the conspiracy by concealing what they knew about the latent defect with the Viper chip, the associated failure rate, the root cause of the failure, and the Viper chip's role in causing set top failures. The Participating Officers did so during conference calls with Cisco and in response to emails from Cisco.
- 149. The conspiracy expanded to at least 19 officers by June 24. Between June 10 and June 21, one or more of the existing members of the conspiracy recruited Marietta Axisa, Aymeric Gisselbrecht, Luigi Arcuri, Angelo D'Arrigo, Matteo Lo Presti, Giacomo Mercadante, Max Saponaro, and David Simone Trapani to join the conspiracy. These Participating Officers were aware of the latent defect with the Viper chip, the associated failure rate, the root cause of the failure, and the Viper chip's role in causing set top failures. However, they agreed to conceal that information from Cisco and provide Cisco with inaccurate information regarding the defect.
- 150. During this stage of the conspiracy, the Participating Officers agreed to defraud Cisco through a misstatement and omission. The Participating Officers knew the Viper chip had abnormally high failure rates due to a latent defect. However, the Participating Officers represented to Cisco that its Viper chips did not have a widespread problem. The Participating Officers also attempted to divert attention from its Viper chip by suggesting problems with Cisco's power supply unit. The Participating Officers concealed the problem and what they knew about the problem from Cisco during conference calls with Cisco and in response to emails from Cisco.
 - 151. During the third stage of the conspiracy, the Participating Officers agreed to defraud

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Cisco through a misstatement. This stage of the conspiracy was carried out by Marietta Axisa, Michael Cosson, Antonino Motta, David Simone Trapani, Sergio Spampinato, William Chan, and Blackey Ho. These Participating Officers knew Viper chips date-coded 309 and above were defective or potentially defective. They also knew that these Viper chips had not been universally treated with a baking process to address the latent defect. However, this group agreed to tell Cisco that Viper chip date-coded 309 and above were not defective and had been through the baking process. They also agreed to tell Cisco that the Viper chips did not have an abnormal failure rate. They executed this agreement during a conference call with Cisco and through delivery of an inaccurate report.

- 152. During the fourth stage of the conspiracy, the Participating Officers agreed to delay providing Cisco with confirmatory information regarding the Viper chip and stall implementation of a reasonable correction of the latent defect. This stage of the conspiracy was carried out by Marietta Axisa, Michael Cosson, Aymeric Gisselbrecht, Luigi Arcuri, Maria-Rosa Borghi, Angelo D'Arrigo, Matteo Lo Presti, Antonino Motta, Fabio Salanitri, Francesca Sandrini, Max Saponaro, Sergio Spampinato, William Chan, Blancky Ho, and Charlie Zhu. These Participating Officers knew the importance of correcting the latent defect and providing Cisco confirmation of a solution. They knew delay would jeopardize Cisco's business relationships with Indian cable companies. However, they nonetheless agreed to delay taking reasonable steps to correct the latent defect or provide Cisco confirmation of a solution.
- 153. Each of the ST Micro subsidiaries involved in this conspiratorial agreement benefited from the sale of ST Micro branded products, and would be damaged if it became known that those products were defective. Therefore, the objective of the agreement at every stage was, among other things, to preserve ST Micro's reputation and the value of its brand, to deflect blame for a major quality control problem, and to avoid the costs of remedying the problem.
- 154. ST Micro-US is responsible for the actions and omissions of ST Micro-Italy and ST-Micro Italy is responsible for the actions and omissions of ST Micro-US. The Participating Officers for these subsidiaries agreed to defraud and harm Cisco in the manner discussed above. While acting within the scope of their responsibilities for the respective subsidiaries, the Participating

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Officers entered a conspiracy to conceal the Viper chip defect and deflect attention away from ST Micro's responsibilities.

- 155. ST Micro-US is also estopped from denying responsibility for the actions and omissions of ST Micro-Italy and ST Micro-China officers; and, ST Micro-Italy is estopped from denying responsibilities for the actions and omissions of ST Micro-US and ST Micro-China officers. Participating Officers of ST Micro-US and ST Micro-Italy promised to assist Cisco and provide Cisco with knowledgeable individuals to provide that assistance. The Participating Officers knew and intended for Cisco to rely on their promises, and Cisco reasonably relied on their promises.
- 156. The Participating Officers from ST Micro-US and ST Micro-Italy selected the officers who communicated with Cisco during the relevant period and addressed the Viper chip defect. At no point did the Participating Officers from ST Micro-US indicate that Cisco should not rely upon the officers they presented and assigned from ST Micro-Italy and ST Micro-China. And, at no point did the Participating Officers ST Micro-Italy indicate that Cisco should not rely upon the officers they presented and assigned from ST Micro-US and ST Micro-China.
- 157. The Participating Officers from ST Micro-US and ST Micro-Italy knew that these officers were providing Cisco incomplete and inaccurate information as well as delaying providing requested information and solutions. The Participating Officers from ST Micro-US and ST Micro-Italy also knew that Cisco was being and would be injured by the actions and omissions of the officers they (ST Micro-US and ST Micro-Italy) presented and assigned.

COUNT ONE: NEGLIGENCE AGAINST ST MICRO-US AND ST MICRO-ITALY

- 158. Cisco incorporates the allegations of paragraphs 1-157 of this Complaint.
- 159. In 2013, ST Micro-US and ST Micro-Italy had a variety of duties to Cisco as a result of its manufacturing of a defective Viper chip and its communications with Cisco on that subject. First, ST Micro-US and ST Micro-Italy had a duty to provide Cisco with complete and accurate information regarding the Viper chip, including its manufacturing process, testing, failure analysis, and defects or potential defects. Second, ST Micro-US and ST Micro-Italy had a duty to provide Cisco documentation demonstrating the reliability of ST Micro's Viper chips. Third, ST Micro-US

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and ST Micro-Italy had a duty to implement corrective actions in the manufacturing of the Viper chips, including but not limited to corrective actions represented to Cisco, in a reasonable and timely manner. ST Micro-US and ST Micro-Italy had a duty to use an appropriate level of care, skill, prudence, and diligence in discharging these duties owed to Cisco.

- 160. ST Micro-US and ST Micro-Italy had these duties after representing to Cisco, among other things, that they (a) would provide complete and accurate information regarding the Viper chips, (b) would provide complete and accurate information regarding the IDSS leakage potential of Viper chips, (c) would change and modify its manufacturing process for the Viper chips to address IDSS leakage potential, and (d) would provide documentation verifying the success of its changes and modifications to the manufacturing process for the Viper chips. ST Micro-US and ST Micro-Italy also had these duties after representing to Cisco and presenting themselves as trusted and critical suppliers for Cisco's products.
- ST Micro-US and ST Micro-Italy breached their duties to Cisco by, among other 161. things, (a) failing to disclose to Cisco in a timely manner changes in the manufacturing process that created a risk of IDSS leakage in the Viper chips, (b) failing to disclose to Cisco in a timely manner the abnormal failure rate of ST Micro's Viper chips, (c) misrepresenting to Cisco the failure rate of its Viper chips, (d) failing to properly screen or test its Viper chips prior to shipment for use in Cisco's set top boxes, (e) misrepresenting to Cisco the uniform use of a baking process on Viper chips date-coded 309 and above, (f) misrepresenting to Cisco the reliability of Viper chips datecoded 309 and above, (g) failing to identify or disclose the root cause of the Viper chip defect in a timely manner, (h) failing to develop and implement a temporary or permanent corrective action for the IDSS leakage risk, and (i) failing to provide Cisco documentation substantiating the reliability of its Viper chips in a reasonable and timely manner.
- 162. As a direct and proximate result of ST Micro-US and ST Micro-Italy's improper conduct, Cisco suffered damages in an amount to be determined at trial, which amount includes, but is not limited to, costs of manufacturing, repair and replacement, shipping, storage, customs, and future lost sales.

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COUNT TWO: NEGLIGENT MISREPRESENTATION AGAINST ST MICRO-US AND ST MICRO-ITALY

- 163. Cisco incorporates the allegations of paragraphs 1-157 of this Complaint.
- 164. In 2013, ST Micro-US and ST Micro-Italy had a duty to provide Cisco with complete and accurate information regarding the Viper chip, including its manufacturing process, testing, failure analysis, and defective or potential defects. During the relevant period, ST Micro-US and ST Micro-Italy represented to Cisco that they would, in fact, provide Cisco with complete and accurate information regarding the Viper chip, including its manufacturing process, testing, failure analysis, and defective or potential defects.
- 165. ST Micro-US and ST Micro-Italy made misrepresentations and omissions of past and existing material facts by, among other things, (a) failing to disclose to Cisco in a timely manner changes in the manufacturing process that created a risk of IDSS leakage in the Viper chips, (b) failing to disclose to Cisco in a timely manner the abnormal failure rate of ST Micro's Viper chips, (c) misrepresenting to Cisco the failure rate of its Viper chips, (d) misrepresenting to Cisco the uniform use of a baking process on Viper chips date-coded 309 and above, (e) misrepresenting to Cisco the reliability of Viper chips date-coded 309 and above, (f) failing to disclose the root cause of the Viper chip defect in a timely manner.
- ST Micro-US and ST Micro-Italy made these misrepresentations and omissions of material facts believing these statements to be true and complete but without reasonable grounds for that belief. ST Micro-US and ST Micro-Italy had no reasonable basis for believing that their affirmative representations were accurate and no reasonable basis for believing that their statements were complete.
- 167. ST Micro-US and ST Micro-Italy made these misrepresentations and omissions with the intent for Cisco to rely on them. The Participating Officers were aware that Cisco was relying on ST Micro-US and ST Micro-Italy to provide complete and accurate information regarding the Viper chip, including its manufacturing process, testing, failure analysis, and defective or potential defects. Cisco informed the Participating Officers of that fact during numerous communications.
- 168. Cisco justifiably and reasonably relied on ST Micro-US and ST Micro-Italy's misrepresentations and omissions. Cisco's reliance was justified because ST Micro-US and ST

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Micro-Italy had expertise on its Viper chips and expertise and control over the performance of its manufacturing process, testing, and failure analysis. ST Micro-US and ST Micro-Italy also had more direct access to accurate and complete information regarding the Viper chips. Cisco informed ST Micro-US and ST Micro-Italy that it would be relying on ST Micro-US and ST Micro-Italy to provide accurate and complete information regarding the Viper chip. ST Micro-US and ST Micro-Italy assured Cisco, among other things, that it could provide accurate, timely, and complete failure analysis on the Viper chips.

As a direct and proximate result of its reliance on ST Micro-US and ST Micro-Italy's misrepresentations, Cisco suffered damages in an amount to be determined at trial, which amount includes, but is not limited to, costs of manufacturing, repair and replacement, shipping, storage, customs, debookings, and future lost sales.

COUNT THREE: INTENTIONAL MISREPRESENTATION AGAINST ST MICRO-US AND ST MICRO-ITALY

- 170. Cisco incorporates the allegations of paragraphs 1-157 of this Complaint.
- 171. In 2013, ST Micro-US and ST Micro-Italy had a duty to provide Cisco with complete and accurate information regarding the Viper chip, including its manufacturing process, testing, failure analysis, and defective or potential defects. During the relevant period, ST Micro-US and ST Micro-Italy represented to Cisco that they would, in fact, provide Cisco with complete and accurate information regarding the Viper chip, including its manufacturing process, testing, failure analysis, and defective or potential defects.
- 172. ST Micro-US and ST Micro-Italy made material misrepresentations and omissions to Cisco by, among other things, (a) failing to disclose to Cisco in a timely manner changes in the manufacturing process that created a risk of IDSS leakage in the Viper chips, (b) failing to disclose to Cisco in a timely manner the abnormal failure rate of ST Micro's Viper chips, (c) misrepresenting to Cisco the failure rate of its Viper chips, (d) misrepresenting to Cisco the uniform use of a baking process on Viper chips date-coded 309 and above, (e) misrepresenting to Cisco the reliability of Viper chips date-coded 309 and above, (f) failing to disclose the root cause of the Viper chip defect in a timely manner.

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173.	ST Micro-US and ST Mic	ro-Italy made thes	se misrepresentations	knowing the		
information	being provided was incomple	te. ST Micro-US	and ST Micro-Italy a	also knew the		
information that their affirmative representations were not accurate.						
174.	ST Micro-US and ST Micro-	Italy made these mi	srepresentations and o	omissions with		

- h the intent for Cisco to rely on them. The Participating Officers were aware that Cisco was relying on ST Micro-US and ST Micro-Italy to provide complete and accurate information regarding the Viper chip, including its manufacturing process, testing, failure analysis, and defective or potential defects. Cisco informed the Participating Officers of that fact during numerous communications.
- 175. Cisco justifiably and reasonably relied on ST Micro-US and ST Micro-Italy's misrepresentations and omissions. Cisco's reliance was justified because ST Micro-US and ST Micro-Italy had expertise on its Viper chips and expertise and control over the performance of its manufacturing process, testing, and failure analysis. ST Micro-US and ST Micro-Italy also had more direct access to accurate and complete information regarding the Viper chip. Cisco informed ST Micro-US and ST Micro-Italy that it would be relying on ST Micro-US and ST Micro-Italy to provide accurate and complete information regarding the Viper chip. ST Micro-US and ST Micro-Italy assured Cisco that it could provide accurate, timely, and complete failure analysis on the Viper chips.
- As a direct and proximate result of its reliance on ST Micro-US and ST Micro-Italy's 176. misrepresentations, Cisco suffered damages in an amount to be determined at trial, which amount includes, but is not limited to, costs of manufacturing, repair and replacement, shipping, storage, customs, debookings, and future lost sales.

COUNT FOUR: NEGLIGENT INTERFERENCE WITH PROSPECTIVE ECONOMIC ADVANTAGE AGAINST ST MICRO-US AND ST MICRO-ITALY

- 177. Cisco incorporates the allegations of paragraphs 1-157 of this Complaint.
- 178. Cisco had business relationships with established customers and partners that offered a reasonably probable future economic benefit to Cisco. These customers and partners included Hathway Cable & Datacom Limited, DEN Networks Limited, Gujarat Telelink Private Limited

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("GTPL"), Manthan Broadband Services Private Limited, Asianet Satellite Communications Limited, and Fastway Transmission Private Limited.

- 179. During all relevant times, the Participating Officers knew or should have known that Cisco had business relationships with these customers and partners. ST Micro-US and ST Micro-Italy knew of these relationships based on communications with Cisco regarding Cisco's set top customers, including those customers who were experiencing failures. ST Micro-US and ST Micro-Italy also knew of Cisco's business relationships with these customers and partners based on ST Micro-US and ST Micro-Italy's own direct communications with them. Furthermore, ST Micro-US and ST Micro-Italy marketed its products to those same customers and partners. And, ST Micro-US and ST Micro-Italy knew of Cisco's existing relationships based on publicly available information regarding set top suppliers to India's cable companies.
- 180. During all relevant times, ST Micro-US and ST Micro-Italy owed a duty to Cisco to exercise reasonable care and to not interfere in these relationships.
- 181. ST Micro-US and ST Micro-Italy breached their duty and negligently interfered with Cisco business relationships by, among other things, (a) failing to disclose to Cisco in a timely manner changes in the manufacturing process that created a risk of IDSS leakage in the Viper chips, (b) failing to disclose to Cisco in a timely manner the abnormal failure rate of ST Micro's Viper chips, (c) misrepresenting to Cisco the failure rate of Viper chips, (d) failing to properly screen or test its Viper chips prior to shipment for use in Cisco's set top boxes, (e) misrepresenting to Cisco the uniform use of a baking process on Viper chips date-coded 309 and above, (f) misrepresenting to Cisco the reliability of Viper chips date-coded 309 and above, (g) failing to identify or disclose the root cause of the Viper chip defect in a timely manner, (h) failing to develop and implement a temporary or permanent corrective action for the IDSS leakage risk, and (i) failing to provide Cisco documentation substantiating the reliability of its Viper chips in a reasonable and timely manner. ST Micro-US and ST Micro-Italy's conduct fell below the reasonable standard of care owed to Cisco.
- 182. ST Micro-US and ST Micro-Italy knew or should have known that their misconduct would interfere with Cisco's business relationships. Cisco informed the Participating Officers that it was relying on ST Micro-US and ST Micro-Italy's actions and representations when communicating

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with customers and making manufacturing and repair decisions. Cisco also informed the Participating Officers of this reliance after it, in fact, relied on ST Micro-US and ST Micro-Italy's actions and representations when communicating with customers and making manufacturing and repair decisions.

- 183. ST Micro-US and ST Micro-Italy's misconduct disrupted and interfered with Cisco's prospective business relationships. ST Micro-US and ST Micro-Italy's misconduct caused Cisco's customers to conclude that Cisco (a) could not supply functional set top boxes on a reasonable schedule, (b) could not repair failed set top boxes on a reasonable schedule, (c) had misrepresented the nature, scope, and extent of the set top failures, and (d) had misrepresented when the set top failures had been properly addressed. It was foreseeable that ST Micro-US and ST Micro-Italy's misconduct would harm Cisco by disrupting its business relationships with these customers and partners, among others.
- As a direct and proximate result of ST Micro-US and ST Micro-Italy's acts as alleged 184. herein, Cisco has suffered damages in an amount to be determined at trial which amount includes, but is not limited to, costs of manufacturing, repair and replacement, shipping, storage, customs, debookings, and future lost sales.

COUNT FIVE: INTENTIONAL INTERFERENCE WITH PROSPECTIVE ECONOMIC ADVANTAGE AGAINST ST MICRO-US AND ST MICRO-ITALY

- 185. Cisco incorporates the allegations of paragraphs 1-157 of this Complaint.
- 186. Cisco had business relationships with established customers and partners that offered a reasonable probability of future economic benefit to Cisco. These customers and partners included Hathway Cable & Datacom Limited, DEN Networks Limited, Gujarat Telelink Private Limited ("GTPL"), Manthan Broadband Services Private Limited, Asianet Satellite Communications Limited, and Fastway Transmission Private Limited
- 187. During all relevant times, the Participating Officers knew or should have known that Cisco had existing business relationships with its customers and partners. ST Micro-US and ST Micro-Italy knew these relationships based on communications with Cisco regarding Cisco's set top customers, including those experiencing failures. ST Micro-US and ST Micro-Italy knew of Cisco's

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existing relationships based on ST Micro-US and ST Micro-Italy's own direct communications with Furthermore, ST Micro-US and ST Micro-Italy marketed its products to those same customers. And, ST Micro-US and ST Micro-Italy knew of Cisco's existing relationships based on publicly available information regarding set top suppliers to India's cable companies.

188. ST Micro-US and ST Micro-Italy intentionally interfered with Cisco's business relationships by, among other things, (a) failing to disclose to Cisco in a timely manner changes in the manufacturing process that created a risk of IDSS leakage in the Viper chips, (b) failing to disclose to Cisco in a timely manner the abnormal failure rate of ST Micro's Viper chips, (c) misrepresenting to Cisco the failure rate of its Viper chips, (d) failing to properly screen or test its Viper chips prior to shipment for use in Cisco's set top boxes, (e) misrepresenting to Cisco the use of a baking process on Viper chips date-coded 309 and above, (f) misrepresenting to Cisco the reliability of Viper chips date-coded 309 and above, (g) failing to identify or disclose the root cause of the Viper chip defect in a timely manner, (h) failing to develop and implement a temporary or permanent corrective action for the IDSS leakage risk, and (i) failing to provide Cisco documentation substantiating the reliability of its Viper chips in a reasonable and timely manner.

189. The Participating Officers knew that their misconduct would interfere with Cisco's business relationships and intended and designed its misconduct to do so. Cisco informed the Participating Officers that it was relying on ST Micro-US and ST Micro-Italy's actions and representations when communicating with customers and making manufacturing and repair decisions. Cisco also informed the Participating Officers of this reliance after it, in fact, relied on ST Micro-US and ST Micro-Italy's actions and representations when communicating with customers and making manufacturing and repair decisions.

190. ST Micro-US and ST Micro-Italy's misconduct disrupted and interfered with Cisco's prospective business relationships. ST Micro-US and ST Micro-Italy's misconduct caused Cisco's customers to conclude that Cisco (a) could not supply functional set top boxes on a reasonable schedule, (b) could not repair failed set top boxes on a reasonable schedule, (c) had misrepresented the nature, scope, and extent of the set top failures, and (d) had misrepresented when the set top failures had been properly addressed.

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191. As a direct and proximate result of ST Micro-US and ST Micro-Italy's acts as alleged herein, Cisco has suffered damages in an amount to be determined at trial which amount includes, but is not limited to, costs of manufacturing, repair and replacement, shipping, storage, customs, debookings, and future lost sales.

COUNT SIX: INTENTIONAL INTERFERENCE WITH EXISTING CONTRACTUAL RELATIONS AGAINST ST MICRO-US AND ST MICRO-ITALY

- 192. Cisco incorporates the allegations of paragraphs 1-157 of this Complaint.
- 193. Cisco had contractual relationships with established customers and partners with whom Cisco enjoyed current economic advantage. These customers and partners included Hathway Cable & Datacom Limited, DEN Networks Limited, Gujarat Telelink Private Limited ("GTPL"), Manthan Broadband Services Private Limited, Asianet Satellite Communications Limited, and Fastway Transmission Private Limited.
- 194. During all relevant times, the Participating Officers knew or should have known that Cisco had existing contractual relations with its customers and partners. ST Micro-US and ST Micro-Italy knew about these contractual relations based on communications with Cisco regarding Cisco's set top customers, including those experiencing failures. ST Micro-US and ST Micro-Italy also knew of Cisco's contractual relations based on ST Micro-US and ST Micro-Italy's own direct communications with them. Furthermore, ST Micro-US and ST Micro-Italy marketed its products to those same customers. And, ST Micro-US and ST Micro-Italy knew of Cisco's contractual relations based on publicly available information regarding set top suppliers to India's cable companies.
- 195. ST Micro-US and ST Micro-Italy intentionally interfered with Cisco's contractual relations by, among other things, (a) failing to disclose to Cisco in a timely manner changes in the manufacturing process that created a risk of IDSS leakage in the Viper chips, (b) failing to disclose to Cisco in a timely manner the abnormal failure rate of ST Micro's Viper chips, (c) misrepresenting to Cisco the failure rate of its Viper chips, (d) failing to properly screen or test its Viper chips prior to shipment for use in Cisco's set top boxes, (e) misrepresenting to Cisco the use of a baking process on Viper chips date-coded 309 and above, (f) misrepresenting to Cisco the reliability of Viper chips date-coded 309 and above, (g) failing to identify or disclose the root cause of the Viper chip defect

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in a timely manner, (h) failing to develop and implement a temporary or permanent corrective action for the IDSS leakage risk, and (i) failing to provide Cisco documentation substantiating the reliability of its Viper chips in a reasonable and timely manner.

196. The Participating Officers knew that their misconduct would interfere with Cisco's contractual relations and intended and designed its misconduct to do so. Cisco informed the Participating Officers that it was relying on ST Micro-US and ST Micro-Italy's actions and representations when communicating with customers and making manufacturing and repair decisions. Cisco also informed the Participating Officers of this reliance after it, in fact, relied on ST Micro-US and ST Micro-Italy's actions and representations when communicating with customers and making manufacturing and repair decisions.

197. ST Micro-US and ST Micro-Italy's misconduct disrupted and interfered with Cisco's existing contractual relations. ST Micro-US and ST Micro-Italy's misconduct caused Cisco's customers to conclude that Cisco (a) could not supply functional set top boxes on a reasonable schedule, (b) could not repair failed set top boxes on a reasonable schedule, (c) had misrepresented the nature, scope, and extent of the set top failures, and (d) had misrepresented when the set top failures had been properly addressed.

198. As a direct and proximate result of ST Micro-US and ST Micro-Italy's acts as alleged herein, Cisco has suffered damages in an amount to be determined at trial which amount includes, but is not limited to, costs of manufacturing, repair and replacement, shipping, storage, customs, debookings, and future lost sales.

PRAYER FOR RELIEF

Plaintiff Cisco Systems, Inc., prays for judgment against STMicroelectronics, Inc., and STMicroelectronics, S.r.l., as follows: (1) for damages in an amount to be proven at trial; (2) an award of litigation costs; (3) an award of interest as allowed by law; and, (4) for other and further relief that the Court may deem just and proper.

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	1	Dated: April 1, 2015	WIN	ISTON & STRAWN LLP
Winston & Strawn LLP 101 California Street San Francisco, CA 94111-5802	2		By:	/s/ Krista M. Enns Krista M. Enns
	3			Attorneys for Plaintiff CISCO SYSTEMS, INC.
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THIRD AMENDED COMPLAINT - CASE No. 5:14-CV-03236-RMW-HRL

DEMAND FOR JURY TRIAL

Plaintiff Cisco Systems, Inc. hereby demands a trial by jury of all issues so triable.

Dated: April 1, 2015 WINSTON & STRAWN LLP

By: /s/ Krista M. Enns
Krista M. Enns
Attorneys for Plaintiff
CISCO SYSTEMS, INC.